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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR JANUARY.

"Time speeds away—away—away—
Another hour—another day—
Another Month—another Year—
Drop from us like the leaflets sere.

"Time speeds away—away—away—
No eagle through the skies of day,
No wind along the hill can flee,
So swiftly or so smooth as he."

JANUARY First, Anno Domini, Eighteen Hundred and Sixty-One. Another year, another decade of years, has slipped away from us almost as unconsciously as the date has slipped from our pen. The year of our Lord 1861, — a mere point in the cycles which have rolled on since the first man first felt the mysterious influence called *life*, and yet how all important, how all-embracing it seems to us.

We are apt to look upon the generations that have been as only so many links in the chain which reaches from the creation down to us. Why, Adam, Methusaleh, Noah, and all who have since existed, only prepared the way for the glorious era of the nineteenth century. We forget that every man and every race has regarded himself and his times in precisely the same light as the one point toward which everything else has tended. Little did Adam think of the use the Westminster divines were going to put him to, as a hen-pecked husband and the author of evil to his race. He thought no more of us, than we do of the people that are going to live six thousand years hence, but supposed, as we do now, that the world was made for him and his, and that he had nothing to do but cultivate his farm quietly, and bring up his children in the fear of God. Little *he* thought of the Assembly's Catechism or Milton's Paradise Lost. Methusaleh—Noah—it seems strange that they never considered themselves in the light of antediluvians, while *we* never think of them in any other light. Strange that Methusaleh could not have answered a question familiar to the smallest school-boy now.—"Who was the oldest man?"

It is hard to realize that our past was the "living present" of somebody else. We look at the Egyptian mummies, who have risen from their tombs and made their first voyage across the waters three thousand years after their death, and have a complacent feeling that the great end of their existence was to be embalmed, and serve as objects of curiosity to us, forgetting that they, with blooming cheeks and beating hearts, chased the same shadows that we are chasing now! Even the mastodon and the trilobite, those fossil remains which the wise ones puzzle their heads over, were once fresh creations, and rejoiced in their new gift of life like a last summer's bee or butterfly. But, surely, we think, Time has set his foot down and is going to stop awhile. Not so. Still

"Time speeds away—away—away,"

and in "the light of other days" *we* may be Noahs and Methusalehs — perchance fossil remains of extinct races! But they wont carry our bodies about for a show—we are too sharp for them there. No—the dust shall *return to the earth as it was, and the spirit unto God who gave it.*

But how it humbles our pride to think that we must share the oblivion which has fallen upon so large a portion of our race. Imagine some future wise man wandering over the ruins of Boston,

New York, or London, as Ledyard and others have gone over Nineveh and Babylon. Standing before the remains of the State House, he says:—"The people of that age must have been partially civilized; they understood the uses of stone and mortar." Coming across the bronze statue of Franklin, he pulls out his note-book and writes, "*Mem.*—The Americans of the nineteenth century were copper-colored, and wore cocked hats!"

Flying across the country in his balloon, he lights on the ancient city of Gotham. The first thing he sees is Barnum's collection of Indian curiosities. "*Note.*—Manhattan—a small island formerly inhabited by savages." As we before remarked, this view of the case is rather humbling to man's pride, but let no one mistake our moral, which is, not that we should sit down and do nothing because "the world passeth away," but that we should be very careful to do the *right thing*, so that though we may not figure largely hereafter in the chronicles of earth, we may yet find our names in the history which the recording angel keeps above!

The year 1860 has had its incidents, some of them of a startling character, and as they occur, one after another, in the years that are wafting us along, they admonish us that there are dangers and temptations within, as well as around, our beloved country, and they all ought to teach us this important lesson, that *what we do* shall well please the recording angel to enter upon his book.

And now to our friends, readers and patrons, "A Happy New Year." May the sixties crown those hopes and fulfil those plans which have been marked out in the fifty-nines. May the same loving eyes continue to beam upon you, and the same kind voices fall on your ear which have so joyfully wished you a happy new year this morning. And yet, for some, we know this cannot be. We know it by the past, for who is there that can look about his family circle of a New Year's day, with no sad memory of an absent face to mar his happiness! Rejoice, we must and should, over the day and the year that dawn upon us now, but in every heart is a niche where none may enter, *sacred to the memory* of the "loved and lost." We must and should ring out our joy-bells over the new year, with its hopes and plans, but for most, there is a deeper tone heard by no other ear—a solemn toll for one, who, on the first of January, 1860, or on some other 1800 which we well remember, looked up in our face and said, "I wish you a Happy New Year!"

Do you see the shade gathering on any brow in your household to-day? Which one shall it be? Which can you best spare? *None—none*, you say, as you gather them closer to your side; but God knows who, and when, and how. Love them, then, and cherish them as you will wish you had when one of the number shall lie down by those already gone, or shall fill that vacant lot in the cemetery, which you have so carefully enclosed and planted with flowers!

Once more, a Happy New Year to all. Let us do with new ardor and new energy what our hands find to do,—for

"Time speeds away—away—away."

GRASS TO THE WINDOW.

There is all the difference in the world between the shadiest and greenest public garden or park, even within a hundred yards of your door, and the green shady little spot that comes up to your very window. The former is no very great temptation to the busy scholar of rural tastes; the latter is almost irresistible. A hundred yards are a long way to go with purpose prepense of enjoying something so simple as the green earth. After having walked even a hundred yards, you feel that you need a more definite aim. And the grass and trees seem very far away, if you see them at the end of a vista of washing your hands, and putting on another coat and other boots, and still more of putting on gloves and a hat. Give me the little patch of grass, the three or four shady trees, the quiet corner of the shrubbery, that comes up to the study window, and which you can reach without even the formality of passing through the hall and out by the front door. If you wish to enjoy nature in the summer time, you must attend to all these little things. What stout old gentleman but knows that when he is seated snugly in his easy chair by the winter evening fireside, he would take up and read many pages in a volume which lay within reach of his arm, while he would do without the volume, if, in order to get it, he had to take the slightest trouble of rising from his chair, and walking to a table half a dozen yards off? Even so must nature be brought within easy reach of even the true lover of nature; otherwise, on a hundred occasions, all sorts of little fanciful hindrances will stand between him and her habitual appreciation.—*Fraser's Magazine.*

FEEDING HOGS.—It is suggested in the *Rural American* that the usual process of feeding pumpkins, potatoes, and other bulky substances for several weeks before they are fed on heavier food, is unphilosophical; as the more bulky food tends to enlarge the stomach and digestive organs, so that from mere habit they eat a larger amount of the more nutritious food than the system requires—more than can be digested, and more than they otherwise would do.

FRAMINGHAM FARMERS' CLUB.—This old and energetic club has commenced a new series of meetings for the season. Its officers are—F. C. WHISTON, President; WILLIAM HASTINGS, Vice President; O. O. JOHNSON, Secretary; BENJAMIN K. HAVEN, Treasurer.

FACTS ABOUT FEEDING HORSES.

In a recent number of the *Rural*, an inquirer asks if fermented grain will fatten hogs, and also states that a conversation with some *savant* in a railroad car has led to the inquiry. Having had occasion to use from two to four road horses for my own driving for the last twenty-one years, and having fed my hogs in the fall from the same grain as the horses for the last ten years, perhaps this limited experience may be of benefit to some of the numerous readers of your valuable journal.

My first impressions were that good, clean, bright timothy hay, and good oats, were alone fit for roadsters. For two or three years I used nothing else, when necessity compelled me to fill my barn with the red-top grass, and my mind with the beautiful prospect of heaves, crow fodder, and all that sort of thing. Contrary to all my high wrought anticipations, however, I found my horses went out of the stable, not as full and plump in the morning, but returned much more so at night, than when fed on timothy. This took the first scale from my eyes.

Soon after this having raised a few hundred bushels of corn of my own, the query arose as to what disposition was to be made of it. Scours, founders, belly ache and all that kind of nonsense, attached itself to the idea of feeding it to horses, when a friend suggested that I should break it up short, and soak it in the ear. On this I found my horses could do as much work as on good oats. The bulk of the cob made it too much labor, and I soon after commenced with shelled corn, and for the last fifteen years have fed no other grain, when at home than this.

About the same time I learned the important fact that hay was not necessary, and that the same money laid out in good bright straw and corn, would last much longer than the same in hay and oats. My plan was to take a barrel and fill, say two-thirds full of corn, and then full of water, and when I commenced feeding this, would have another barrel filled and soaking while using the first. The odor which it gives in summer is not sometimes as pleasant as otto of roses, and I have found that with some horses there was an objection to feeding it, if compelled to feed them away from home, for they would utterly refuse any other kind of grain. It was seldom that I found a horse that would eat more than four quarts of this three times a day, which is equivalent to less than three of dry corn for any length of time. Strange as it may seem to many an old fogy, after harvesting my crop of carrots, I have substituted one and two feeds a day of four quarts of carrots for their feed of corn, and had them do equally as well; but have never given them to my hogs instead of corn.

If said learned *savant* will consult Liebig's Animal Chemistry, he will find the true rationale to the above facts. There are many advantages in feeding fermented grain to horses subject to fast driving, only two of which I shall mention now. First—it is easier of digestion, so that if any one it obliged to start the horse as soon as his meal is finished, he is not so apt to scour. Second—you can feed him, however warm he may be, without the least fear of injury. Give him his regular feed and then turn him to the barrel and let him eat his fill, and your humble writer will guarantee all damage from it. And if he has just learned that he has been killing lean hogs for the last ten years, surely he must need some lessons.—*Rural New-Yorker.*

SCIENCE IS KING.

Some of our readers are anxious under the present condition of our national affairs, and make numerous inquiries about results. We cannot tell. These only are known to Him who guided our forefathers here, and who has sustained us in the trials through which we have passed. There is certainly cause for anxiety, but as yet, none for alarm. No mortal power can starve out or hunt down a population like that of New England, made up of men and women who can work all day, live upon saw-dust pudding, if necessary, and then defend themselves all night. They can neither be subjugated, nor will they violate the rights of others, so long as the Homes and Hearthstones of New England are their own. *Our* anxiety is, that the pride of wealth, the insatiable desire to accumulate riches, will induce some of our merchant people to do violence to their consciences, to liberty and God.

It shows the weakness and folly of any men when they threaten to starve a free people by withholding from them one or two agricultural products; it shows, also, their ignorance of the *laws of trade*, which are as utterly beyond their control as are the motions of the waves which lave our beautiful shores.

We have given in another column an article upon the subject, "*Science is King*," and invite the attention of the reader to it. In the excited state of the public mind, we commend to all the use of mild language, but a defence of principle as firm as the granite hills which tower above us. Let us examine our position, and see if we are right before God and man, and if we find ourselves to be so, death is better than concession.

WHEAT IN NEW HAMPSHIRE.—Mr. E. M. Dunbar, writing to the *Rural American*, says that in New Hampshire there has been more excitement about the crop of wheat this year than about the election of President, and adds:

I think the yield of wheat will average thirty bushels to the acre throughout the State. I have raised thirty-two and a half bushels from one hundred and fifty rods of ground, which makes as nice flour as anybody need to have. Others have done better, harvesting upwards of forty bushels to the acre.

KEEP HOGS CLEAN.—Hogs kept all the time wallowing in their own filth, can neither be healthy nor make good nutritious pork. The stench of the pen permeates the tissues of the animal through the medium of the lungs. So says the Ohio *Farmer*.

For the New England Farmer.

THE POTATO ROT NOT CAUSED BY INSECTS.

MR. EDITOR:—In your paper of the 3d of November, we have another communication from Mr. Lyman Reed, of Baltimore, on the subject of the potato rot, which seems to require some brief notice by me, not on account of any new fact or argument adduced, but for the persistency with which he asserts and re-asserts the old one.

We are told by the wise man, that "He that is first in his own cause, seemeth just: but his neighbor cometh and searcheth him." I have no doubt but Mr. Reed thinks his cause is just, that he really believes he has discovered the true cause of the potato rot, and that all who do not believe his assertions on this subject, and draw the same inference that he does, are not only opposing the truth, but opposing his interests and his rightful claims upon the public. Now, as I profess to be a neighbor to Mr. Reed, notwithstanding the difference in our localities, and as I wish to act a neighborly part towards him and his interests, he will not think it strange that I should put him to the proof and give him an opportunity to prove his claims upon the public, or, on the other hand, that I should come forward, with the full conviction that the truth is mighty and will prevail, and endeavor to search out his boasted facts and inferences, and ocular demonstrations.

Let us, then, attend to the facts in the case, if there be any, and see what bearing they have upon the subject now under consideration. The only fact, so far as I know, which has been adduced to prove that insects are the cause of the potato rot, is the fact, so often repeated, that, by the use of the microscope, Mr. Reed has discovered insects on the diseased potatoes which he examined and exhibited to others. This isolated fact has been testified to by seventeen members of Congress, by Charles L. Flint, Esq., Secretary of Mass. Board of Agriculture, and by one of the Professors in the Smithsonian Institute. And what inference is attempted to be drawn from this one solitary fact, and by these nineteen certificates? Why, what every knowing farmer and skillful tiller of the soil, from his own observation and experience, knows to be false, that insects are the cause of the potato rot. The fact of the presence of insects is cheerfully admitted; but the inference attempted to be drawn is denied; because the insects are regarded as the consequent or concomitant of the rot, and not the cause of it.

There are other facts in the case, and a large number of them, too, to which I have had my attention directed for several years past, and some of which I pointed out in my seven reasons, which are wholly inconsistent with the idea that insects are the cause of the potato rot. A few examples must suffice:

First Fact.—Take any of the most delicate and early kinds of potatoes, such as are most liable to rot, and having put them a sprouting early in March, and planted them as early in April as the season will admit, and in a favorable soil, they will entirely escape the rot, because they will be dead ripe before the season of the rot commences.

Second Fact.—Take from the same bin some of the same kinds of potatoes, and plant in the same field, at the usual time of planting, and they will blast and rot, if it be a season in which the rot prevails generally.

Third Fact.—The potato rot does not take place every year, and hence cannot be caused by insects, who would necessarily work every year in order to propagate their species, otherwise they would become extinct.

Fourth Fact.—The potato rot does not manifest itself in all places equally, but is confined to certain localities in the same field, which would not be the case, if caused by insects.

Fifth Fact.—Soils highly enriched by active, concentrated and stimulating manures, are more affected by the rot than other soils.

Sixth Fact.—It frequently happens the blast turns out to be nothing but a mere blast which kills the tops and checks the growth of the tubers, but leaves them all smooth and bright, and, to all appearance, entirely unaffected by disease, which would not be the case, if the blast were caused by insects on the tubers.

Seventh Fact.—All kinds of potatoes are not alike affected by the disease; but, on the contrary, some kinds are entirely exempted from it. Such is the fact with regard to the black potato, and some others.

Eighth Fact.—The potato rot always manifests itself, if at all, at a particular time or season of the year, within the limits of a very few days, which time is always preceded by the most remarkable thermal changes in the state of the atmosphere—by a few days of extremely hot and dry weather, succeeded by copious, warm rains, and accompanied by an oppressive, sultry and muggy atmosphere.

These *eight facts* are respectfully commended to the careful examination of Mr. Reed, and of those other nineteen gentlemen of distinction, whom he has led to adopt his insect theory, and whose certificates he has printed in the papers and trumpeted forth to the world. It will not do to deny these facts, or to ignore them, for they are known to exist. They are facts, and not inferences, or reasonings, or logical deductions; and they must be met, and fairly met; and they must be answered, and fairly and fully answered, each fact by itself, before any credit can be given to the insect theory. There must be no sophistry in the case, no dodging, no quibbling, no arguing in a circle, no resorting to the old assertion of "ocular demonstration;" no, but it must be shown, that all these facts are perfectly consistent with the insect theory.

JOHN GOLDSBURY.

Warwick, Nov., 1860.

CEREAL GRAINS.—The Manchester *American* says that Mr. Killam, an enterprising farmer of Temple, N. H., has for some years been collecting all the varieties of grain in this country, and such as he could obtain from Europe. This season he sowed a small parcel of each, seventy in number, of which over forty were wheat—the rest rye, oats and barley. The most of these species have a very slight difference in their general appearance. The Egyptian wheat is the most marked, having a cluster of heads, instead of a single one, on each stalk. Mr. K. will keep a sample of the kernels and heads of each in his cabinet, as an agricultural curiosity.

FIBRE-CROPS---FLAX.

Some inquiries have recently been made of us in regard to the flax crop, and attention is again called to the subject by the discovery of a mode of "rotting it," and separating the external covering, the fibre, from the inner stem, or stalk part.

Formerly the cultivation of flax was considered one of the most important branches of New England industry. A good crop of flax, to be manufactured by the female members of the family into articles of domestic use, was an object of laudable ambition with many farmers. As a field product, its cultivation was regarded as somewhat difficult—on any soil of moderate fertility,—though, like other products, it always succeeds best when supplied liberally with its appropriate food. In preparing lands for flax, experience had early demonstrated the fact, that a fine, deep soil is much better adapted to the growth of flax, than one of an opposite texture. It was early ascertained to be a very exhausting crop, and in the rotary system adopted on the continent, and in Belgium, at this day, where the culture of flax is extensively pursued, it is not allowed to enter oftener than once in seven years. Calcareous lands, or lime in its caustic state, it has been ascertained, are detrimental to the growth of this plant. Several soils which had produced excellent crops of flax were submitted to analytical examination, and were found to contain:

	No. 1.	*No.* 2.	*No.* 3.
Silica and silicious sand	73.72	69.41	64.93
Oxide of iron	5.51	5.29	5.64
Alumina	6.65	5.70	8.79
Phosphate of iron	.06	.25	.31
Carbonate of lime	1.09	.53	1.67
Magnesia and alkalies, with traces of sulphuric and muriatic acids	.32	.25	.54
Organic matters	4.86	6.67	9.41
Water	7.57	11 48	8.73
Total	99.78	99.58	98.22

In all these specimens the organic matter was highly nitrogenized, a fact which renders their fertility in the production of the flax crop, easily understood. The ligneous substance of the flax plant, which, by subsequent manipulation is converted into linen, is found to be composed of precisely the same elementary matter as starch and sugar, and in very nearly the same relative proportions. In one hundred parts—omitting the matter contained in the cellular cavities, it gives

Carbon	50.00
Hydrogen	5.55
Oxygen	44.45

One remarkable fact in relation to this plant is, that the fibre, which alone constitutes the real money value of flax, is elaborated solely from atmospheric pabulum, or the food derived during its life from the air. All the elements it derives from the soil are employed by the system, in organizing substances which are of no practical value to the farmer, but, on the contrary, rather a disadvantage.

Probably the best soil for the cultivation of flax is a light, fine loam, with a slight admixture of clay, but not sufficient to render it wet in moist seasons, or subject it to the liability of parching or becoming "baked" when dry. A chemical analysis of the plant may partially indicate what manure would be adapted to its full development. We have already given the results of several analyses of the *fibre*; we will now give analyses of the flax plant as it grows, and of the ash after burning:

FLAX PLANT.

Carbon	38.72
Hydrogen	7.33
Nitrogen	.56
Oxygen	48.39
Ash	5.00
	100.00

ASHES OF FLAX PLANT.

Potash	9.78
Soda, (sea air)	9.82
Lime	12.33
Magnesia	7.79
Oxide of iron and alumina	6.08
Silica, (sand)	21.35
Sulphuric acid	2.65
Chlorine, (sea air)	2.41
Carbonic acid, (air charcoal)	16.95
Phosphoric acid	10.84
	100.00

For the New England Farmer.

APPLES FOR MILCH COWS.

MR. EDITOR:—Being a constant reader of the *Farmer*, and somewhat interested in agriculture, although it is not my business, and knowing how much people are opposed to feeding out apples, particularly to milch cows, and of the misapprehension of the amount of nutritious matter contained in them, I thought I would give my experience in the trial of them. I have a cow four years old last spring, that calved in February, and will calve again in March, which I have fed every day since apples were large enough, with from half a peck to a peck. She gives six and a half quarts of milk per day. Now, if the apples would have dried her up, as some people say, she would not certainly be giving that amount now, as my neighbors have cows equally as good as mine, that do not give more than one-half the quantity.

I am aware that many object to feeding out apples, on the ground that the cows will get choked by swallowing the apples whole. I have never known of an instance happening where the cow was tied up and the apples put before her in a box. If fed in the yard or field, they are liable to be started quickly by another creature, and the apple thrown into the gullet, where, being too large to pass into the stomach, it sticks. I heard quite a good farmer remark that cattle are hurt by eating too many apples at a time—they break into an orchard and eat beyond the capacity of the stomach to digest. Would it not be so if they ate green corn, or any other kind of food, to excess? In fact, every excess in partaking of food produces injury, and is followed by symptoms of indigestion. I am satisfied that one-half a peck of apples given to a cow morning and evening, will increase the quantity and quality of the milk,

and are equal, if not better, to a peck of carrots. There are in 100 pounds of carrots, 10 pounds of nutritious matter and 90 pounds of water; in 100 pounds of apples, 16 pounds of nutritious matter and 84 pounds of water; in the sweet apple there would be double the quantity. Now as apples are plenty this season, and it is impossible for many farmers to get barrels to put them into, let them give them to their stock, especially cows, and they will find it is better to use them so, than make them into cider, or sell them at the present low prices. When we consider the little trouble in raising the apple compared to the carrot, and the preference the cattle give to the apple, its soft, pulpy nature compared to the hard carrot, being easier of digestion, and a more healthy article of food in proper quantities, I think we shall decide in favor of the apple, and use them more than we have done for the feeding of stock. W.

Dover, N. H., Nov. 5, 1860.

For the New England Farmer.

HARDENING UNRIPE CORN.

MR. EDITOR:—I find, from some experiments made this fall, that corn that fails to ripen in the field, by reason of early frosts, may be hardened so as to be ground into good meal (even if it is not seared at all when gathered,) by being immersed in water at boiling heat, kept under four or five minutes, and afterwards dried in the sunshine, or elsewhere.

Corn treated in this way becomes as yellow as that ripened in the field, and there need be, I think, but little fear of its moulding while drying.

The above may not be new to the readers of the *Farmer* although it is to me; neither might it be a paying process, for all corn-raisers; but there may be times and places when and where it will pay to try it; and for those I make it public. JOHN CALVIN GITCHELL.

Boscawen, N. H., Nov., 1860.

POWER OF A BIRD'S SONG.—When we hear the song of a soaring lark we may be sure that the entire atmosphere between us and the bird is filled with pulses, or undulations, or waves, as they are often called, produced by the little songster's organ of voice. This organ is a vibrating instrument, resembling, in principle, the reed of a clarionet. Let us suppose we hear the song of a lark, elevated to a height of 500 feet in the air. Before this is possible the bird must have agitated a sphere of air 1000 feet in diameter; that is to say, it must have communicated to 17,888 tons of air a motion sufficiently intense to be appreciated by our organs of hearing.—*Tyndall's Glaciers of the Alps.*

CINCINNATI VINEYARDS.—Dr. S. Mosher states in the Ohio *Valley Farmer*, that he has visited some dozen or more vineyards in the vicinity of Cincinnati, on both sides of the river, and found all that he visited more or less affected with that most fatal malady of the Catawba grape, the rot—having destroyed by its ravages, varying from one-fourth to three-fourths of the crop.

SIXTY-FOUR BUSHELS OF WHEAT TO THE ACRE.

The Baltimore *American Farmer* publishes the statement of Mr. M. T. Goldsborough, of Ellenboro', near Easton, Md., of a crop of wheat raised the past season, on the farm of his late father, Col. N. Goldsborough, by which it appears that 27½ acres produced at the rate of a mere fraction less than 55 bushels per acre, allowing 60 pounds to the bushel; the best 9 acres of which produced at the rate of 64½ bushels per acre. We copy a few paragraphs from the statement:

The field upon which this crop grew had, like the other proportions of the farm, been subject to the three field rotations of corn, wheat and clover, for a great number of years. It had been the practice for years on this, as on many other well-cultivated farms in this country, to dress the entire corn cultivation with some improving material. My father used unrotted farm-yard manure, marsh mud, woods mould, Indian oyster-shell deposit, marl, or lime variously applied. He never used the marl or lime extensively, but obtained almost all of the calcareous manure which he applied from the Indian oyster-shell banks, and this he at one time applied very heavily upon land not shelled by the aborigines.

It was, in its due course, manured and planted in corn in 1856, and in the fall the ground was harrowed, rolled, drilled in wheat without guano, and set in clover in the following spring. The crop reaped from it in 1857, (a bad wheat year,) was about twenty bushels, per acre. I mention this to show the capability of the soil under such circumstances.

In the spring of 1858, the clover was filled with that terrible pest, "Pigeon weed," or "Red root," which now fatally chokes out wheat on many fine farms in this country, and I attempted to prevent it from seeding by stocking the field heavily, about the last of April, with horses, cattle, sheep and hogs, but the season being very genial for grass, the weed was left untouched, and therefore, to prevent its seed from ripening, I put in a large force of plows in the latter part of May, and broke the field about six inches deep.

Stock continued to trample over the plowed surface until after harvest, and as the plowing was at so early a period, it was of course necessary to harrow and roll it a great many times, (I do not know how often, as I do not reside on the farm, and no journal was kept,) to keep the grass and weeds under. It was *not plowed a second time*, and when it was drilled, there was nothing like a clod to be seen on the surface, and there was only loose earth enough, and in the condition of powder, to allow the drill to cover the wheat effectually, the earth beneath the wheat having become very firmly packed by the action of rain, the trampling of stock, and the effect of implements, in the four months that intervened between the plowing and drilling.

It was drilled with an old Pierson drill nine inches wide between the tubes, on the 4th, 6th and 7th of October, the wheat being deposited about one inch below the surface of the soil in the bottoms of the drill furrows.

The seed wheat drilled was thirty bushels—the

variety being the beautiful smooth headed white wheat, obtained in this country a few years ago, from Mr. Johnson, of North Carolina.

Two bushels were drilled on one acre, and the remaining twenty-eight bushels were drilled at the rate of one bushel and sixty-one hundredths of a bushel per acre, at which rates the thirty bushels extended over eighteen acres and fourtenths of an acre.

The growth was enormous, being so dense that two persons, eight or ten feet apart in it, were invisible to each other, and the tallest specimens were six feet four inches in height, but it was generally about five feet six inches in height.

A few days ago, I carefully measured the whole of the ground drilled with the said thirty bushels. [The land and produce were divided with the intention of applying for a premium.]

The following is a statement of the yield:

THE 18 4-10 ACRES YIELDED,

Bushels.	*Bushels of 60 lbs.*
300 prime wheat weighing 63 lbs.	315.00
495 prime prepared for seed, weighing 63½ lbs.	523.87
795 prime wheat weighing	838.87
24 raked wheat weighing 62 lbs.	24.80
64 screenings and headings weighing 56 lbs.	59.73
883	923.40

883 divided by 18 4-10 gives 48 bushels (measured) per acre. 923.40 divided by 18 4-10 gives 50 18-100 bushels of 60 lbs. per acre.

THE 9 1-10 ACRES YIELDED,

495 prepared, used for seed, weighing 63½ lbs.	523.87
7 prime, weighing 63 lbs.	7.35
502 prime, weighing	531.22
12 raked wheat, weighing 62 lbs.	13.40
46½ screenings and headings, weighing 56 lbs.	43.40
560½	587.02

560½ divided by 9 1-10 gives 61 6-10 bushels (measure) per acre. 587.02 divided by 9 1-10 gives 64½ bushels of 60 lbs. per acre.

A MAN'S BODY A LIVING STOVE.

The *Eclectic Review*, treating of the caloric or heat in a human body, compares our body to a "living stove—walking fire-places—furnaces in the flesh," if those terms can be applied to any apparatus for the express production of human caloric. After stating the fact of the latent heat of the human frame, the writer says: Suppose it to be the month of January, when winter is presumed to be reigning in full vigor, and every inanimate object appears to have been drained of its caloric; still the human structure will exhibit a surplus of sixty degrees above the freezing point. Why is this? How does it happen that while a bronze statue fluctuates in its temperature with every passing breeze, the living organism maintains its standard heat unimpaired, and preserves its tropical climate within, although the air should be full of frost and the ground enveloped in snow? It is manifest that we must have some power of "brewing" caloric for ourselves. Assuming that our bodies are veritable stoves, the reviewer proceeds to explain where we procure our fuel. Fortunately our coal and fire-wood, he adds, are stored up in a very interesting form. They are laid before us in the shape of bread and butter, pudding and pies, rashers of bacon for the laborer, and haunches of venison or turtle soup for the epicures. Instead of being brought up in scuttles, they are presented in tureens, dishes, or tumblers, or all of them in pleasing succession.

Speaking seriously, and looking at the question from a mere human point of view, could any project appear more hopeless than one for burning fuel in a soft, delicate fabric like the human body—a fabric composed, for the most part of mere fluids—a fabric that might be easily scorched by excess of heat, or damaged by excess of cold? Does it not appear like a touch of quixotism in nature to design a stove with flesh for its walls, veins for its flues, skin for its covering? Yet here, we have seen, is an apparatus which, as if by magic, produces a steady stream of heat—not trickling penuriously from the fountains, but flowing on day and night, winter and summer, without a moment's cessation, from Jauuary to December.

Carry this splendid machine to the coldest regions of the globe—set it up in a scene where the frosts are so crushing that nature seems to be trampled dead—it still pours on its mysterious supplies with unabated profusion. It is an apparatus, too, which does its work unwatched, and, in a great measure, unaided. The very fuel which is thrown into it in random heaps is internally sifted and sorted, so that the true combustible elements are conveyed to their place, and applied to their duty with unerring precision. No hand is needed to trim its fires, to temper its glow, to remove its ashes. Smoke there is none, spark there is none, flame there is none. The pulmonary chimney is never clogged with human grime. All is so delicately managed, that the fairest skin is neither shrivelled nor blackened by the burnings within. Is this apparatus placed in circumstances which rob it too fast of its caloric? Then the appetite becomes clamorous for food, and in satisfying its demands the fleshy stove is silently replenished. Or, are we placed in peril from superabundant warmth? Then the tiny flood-gates of perspiration are flung open, and the surface is laid under water until the fires within are reduced to their wonted level. Assailed on one hand by heat, the body resists the attempt, if resistance be possible, until the store of moisture is dissipated; assailed on the other by cold, it keeps the enemy at bay until the hoarded stock of fuel is expended. Thus protected, thus provisioned, let us ask whether these human hearths are entitled to rank among the standing marvels of creation? for is it not startling to find that, let the climate be mild or rigorous, let the wind blow from the sultry desert or come loaded with polar sleet, let the fluctuations of temperature be as violent as they may without us, there shall be still a calm, unchanging, undying summer within us?

A WORD FOR BLACKSMITHS.—Dr. Dadd, in closing an article in the *American Stock Journal*, on Shoeing Horses, says: "It is my firm belief that blacksmiths are often, very often, blamed without any rational excuse for censure." And even in regard to *bad* shoeing he remarks: "It is my opinion that many smiths do not obtain a fair compensation for their services in the prosecution of their laborious and dangerous vocation."

MOVING TREES.

There are few places which are ornamented with shrubbery, fruit, and shade trees, where it does not become necessary to change the place of some of them, in order to prevent their standing too thick, destroying a prospect, or injuring some building or plant more valuable than itself. The tree to be removed, however, has been tended with cost and care, and is needed for some other unoccupied place. It has gained considerable size, and the question arises—"How can it be removed with certainty of success?" The common mode of digging about them, and removing by hand, is a slow, difficult and uncertain one, as the earth in most cases falls away from the roots, leaving them exposed to sun and wind, and injury in conveying it to its place of destination.

Where a trench is dug about a tree, and the ball of earth is left to be frozen, there is less danger of injury to the roots, or of losing the tree itself.

After we have carefully dug about a tree, we need something to aid us in lifting it from its bed and in transplanting it gently to the hole that is to receive it. It cannot be placed upon a cart, or upon a drag, and keep the earth attached to the roots and fibres by which it is to be sustained—the motion to get it upon either will usually shake it all off.

The little, inexpensive machine figured above, it seems to us, would greatly facilitate the labor of moving trees, and at the same time enable us to do the work so as to secure the life of the tree.

The editor of the *Horticulturist*, from whom we have procured this cut, says "it illustrates a very convenient contrivance for moving large trees. The cut almost explains itself. The truck is backed against the tree, the tongue thrown up against the body, and secured by stout cords. The earth is then removed from around the roots, the tongue pulled down by means of the rope attached to the end of the tongue, a team hitched fast, and the tree removed to its new quarters. The truck is placed over the hole in which the tree is to be planted, the tongue thrown up, and the tree is then in just the right position for filling in the earth."

Most farmers could rig up one of these machines with trifling cost, if, indeed, there were any, because there is usually an old pair of wheels and a cart nib that can be spared as well as not. One machine would answer the purposes of a whole neighborhood, and would undoubtedly save in time, annually, more than its entire cost.

The wheels and axletree of a common ox cart would answer a pretty good purpose for trees of considerable size, by lengthening the nib, and the forward wheels and shafts of a common light wagon might be made to answer for small trees.

RULES FOR OBSERVING THE BAROMETER.—The following rules for observing the barometer, taken from Prof. Silliman's lectures, may aid in making the use of this instrument more clear to many of our readers:

1. The sudden fall of the mercury is usually followed by high winds and storms.
2. The rising of the mercury indicates generally the approach of fair weather; the falling shows the approach of foul.
3. In sultry weather the falling of the mercury indicates coming thunder. In winter a rise indicates frost. In frosty weather a fall indicates thaw; a rise, snow.
4. Whatever change of weather follows a sudden change in the barometer, may be expected to last but a short time.
5. When the barometer alters slowly, a long continuation of foul weather will succeed if the column falls, or of fair weather if the column rises.
6. A fluctuating and uncertain state of the barometer indicates changeable weather.

MILK BEFORE CALVING.—Mr. J. E. Hazelton, of West Newton, has a heifer two years old last spring, which began to give milk about two months ago, and has continued to yield from three to four quarts per day, to the present time, Nov. 10th, when she dropped her first calf, which is in fair condition, and likely to thrive. The heifer is half-blood Jersey, and was raised by Judge French. A similar instance occurred in the stock of the editor of this paper, in which case the calf was dropped about four months after the heifer commenced giving milk.

For the New England Farmer.

"REMEDY FOR CHOKED CATTLE."

MR. EDITOR:—Under this heading you gave, by request, a republished article, in the *Farmer*, Nov. 3d, upon the removal of foreign or lodged bodies in the gullet of animals, viz.: cattle.

Your instrument has for its recommendation that of being cheap, easily made, its mode of use readily understood, and of sufficient strength, if the power is applied, to overcome almost any obstruction, or even make an artificial passage in the most vulnerable point.

But a thought—the thought—that "a common broom-handle" is rather a formidable instrument to use in cases of this kind unless used with much precaution; and though the illustrations and directions for making and using are remarkably plain, yet with only this caution, "then gently press the stick, or probang, down the throat," as not being quite positively cautious enough in these dangerous accidents when "all hands" are so liable to be excited unduly.

As an illustration of this unnecessary excitement a case in point will suffice.

Not long ago I saw a noble ox that attempted to eat a potato while at work, but was choked. The owner called a doctor of medicine to counsel, and living in a village, there were enough assistants. They put him into the shoeing slings, and with a common ox-goad pushed it down, or at least pushed the goad down, but in so doing lacerated the gullet, as it afterwards proved.

From the choking, the means used, and the very violent muscular exertions of the agonized ox, he died in a few minutes after, while they were preparing "to tap." I did not see him till the ox-goad had done its work of mischief.

Ought it not then to be emphatically enjoined on the operator to gently push the stick, as this accident of rupture is liable to occur?

Would it not be advisable to use a flexible stick, if the emergency demands a resort to this mode of relief, when a *bona fide* probang is not at hand, as, with its use, the liability of a fatal accident would be somewhat less, while at the same time it would be abundantly efficient to apply as much force as would be admissible?

Is not the bulb end rather large, (2½ inches in diameter,) unless it is for large cattle? The danger of cattle getting choked with things of this size is quite small, if any, but rather with potatoes, or the like, much smaller.

Would it not be better, before resorting to the probang, to pour down the creature a half pint of oil to lubricate the passage, and by manipulations for its ejection, or injection, quite perseveringly, try a much safer mode of procedure?

In good old "tater" times, it was not a very uncommon occurrence, hereabouts, for cattle to get choked, and we ruralists could almost always get the offender up or down—up, was preferred,—with but little difficulty, when it was lodged in the upper part of the passage, or where it could be felt externally, by tying the creature to a post or stanchion, by the horns, and having one fore foot held up by a rope or strap over the back, and manipulations.

Perhaps this may be called rather a primitive mode by some, but it has been all efficient in so many instances where probangs and veterinary surgeons had not even been heard of, in bygone days, that, with the oil modification, I have quite a good opinion of its efficiency.

This is an important subject, and any light or knowledge upon it that you or your many intelligent correspondents can emit through the columns of the *Farmer*, will be useful to others in emergencies of this kind.

The more simple and efficient ways known the the better, yet it is not intended to be intimated that the probang will not be required in some obstinate cases, and then that some will prove fatal if even œsophagotomy is resorted to with the aid of experienced counsel, which is unfortunately not often to be obtained in rural districts in a reasonable time.

But as the veterinary art is justly receiving more attention, it is to be hoped that ere long the services of those who are qualified can readily be obtained when serious accidents happen to any of our domesticated animals. O. W. TRUE.

THE WEALTH I'VE GOT.

BY HENRY MORFORD.

Not houses and lots in a principal street,
Not rich fields flowing with golden wheat,
Not darksome mines deep stored with gold,
Not piles of ingots in coffers old;
Not these, though they fill so many a lot—
These form no part of the wealth I've got.

I'm poorer to-day than a year ago,
I was poorer then than I cared to know,
The future has nothing but struggle and care,
For the bread to eat and raiment to wear—
Yet I still look onward and murmur not,
For I'm very rich in the wealth I've got.

I've kind ones to love me, rich or poor;
I've friends whom I hold with a friendship sure;
I've pleasures and duties, day by day,
And work for each hour that passes away;
I've a home with its treasures—earth's dearest spot—
Where I hoard, like a miser, the wealth I've got.

I've a heart, thank God! that loves mankind;
I've a spirit, thank God! that can be resigned:
I've a hope to finish some trifle of good
Before I lie down for the grave-worm's food;
I've a hope that neither stain nor blot,
Will cling, when I'm gone, to the wealth I've got.

I've a trust in the Master whose tender care
Giveth bread to eat and raiment to wear;
I've a firm, stout heart, that he giveth me,
To bear whatever my fortune may be;
So earth can be never a sorrowful spot,
While kind Heaven leaves me the wealth I've got.

FAIRS.—The editor of the Michigan *Farmer* gives a table of entries at the Annual State Fairs of 1860 and 1859, from which it appears that there was a falling off this year equal to 25 per cent. in every department. He also says:—"We have looked carefully through all our country exchanges of this State to see what was said of the several county fairs that have been held this fall, and find them almost without exception filled with complaints of apathy and want of interest, desolate halls, empty tables and dissatisfied lookers-on."

For the New England Farmer.

FENCE POSTS---HOW TO SET THEM.

A late number of the *Farmer* contains an inquiry by R. H. Davis, in regard to setting fence posts in land that heaves with the frost. Being desirous, some years ago, to erect a permanent dooryard fence on similar land, I addressed the same inquiry to the *Farmer*, to which several replies were published, containing directions, most of which had been previously tried, and found unsatisfactory. These plans were to set the posts so deep they would reach below the frost, or dig large post holes, and fill with small stones, chip manure, sand, &c., or securing the post by a tenon and pin to a horizontal timber laid below the frost.

Now all of these, and similar methods, will fail of securing the object desired, because it is the presence of water in the earth that causes the post to rise with the frost. As the earth freezes, and adheres firmly to the outer surface of the post, it must of necessity heave with the frost, however far it may extend below the frost, and of course it would, with the same facility, be drawn from a mortice. In the case of setting the posts with small stones, &c., the spaces between the stones will soon fill from the surface and surrounding earth with water, which, freezing to the post, will cause it to heave, and leave its proper position. In soils that retain but little water, posts may be set quite securely for a time by filling a proper space around the post, and as far in depth as the frost extends, with gravel stones, or refuse tan bark. But there is a better way.

The practical adoption of the plan I now propose may look formidable and expensive, but it will prove satisfactory, permanent, and last a lifetime. The first step, as has already been suggested, is to draw off the water. To do this, dig a ditch on the line where it is proposed to make a fence, two feet wide and three feet deep, or below the frost. Set the posts in this ditch, say eight or ten feet apart, as may be desired, and fill around the posts and the whole ditch with small stones. It is best to make the ditch wider, say three feet, where the posts are set, and jam the stones tight around. To this ditch now dig a drain, without which all previous labor will be vain, laying tile, or stones at the bottom, and filling above with earth, and the work is done.

Having followed this plan several years ago, with entire success, I confidently recommend it, as the best way to set posts in frosty land. It is proper to remark, that where the land is so situated as to preclude draining as low as the bottom of the posts, so there shall be no standing water around the posts, this plan will be impracticable. S. G. B.

Essex, Vt., Nov., 1860.

SOUTHERN ILLINOIS.—Mrs. Frances D. Gage says in a communication to the Ohio *Farmer*, that "the seasons are so long in Southern Illinois that I am sure sweet potatoes planted here in April, might be eaten by the first of August in good seasons; and planted the first of July, they would ripen in October, for winter use. Some broom corn came up in our garden in the middle of May, and ripened; as there were but a few stalks, we paid no attention to it. The seeds fell, and new sprouts came up and ripened also, sufficiently to have been lopped before the frost came; two crops could be easily raised, I think."

CONCORD FARMERS' CLUB.

The second meeting of the series for the season of this association took place on Friday evening last, the subject for discussion being "*Fruits, and their Culture.*" It being the turn of JOHN B. MOORE, Esq., one of the largest and best farmers of the town, to prepare an Essay, he read the following on

FRUITS AND THEIR CULTURE.

MR. PRESIDENT:—The subject assigned for discussion this evening is a very interesting one to me, but has so wide a range that I do not propose to examine it in detail, but to confine myself to the Pear and Grape, only.

The Pear is a fruit worthy of more general cultivation than it now receives. I am aware of the extensive attempts to cultivate it, and also of the fact that there has been a large quantity of pear trees planted within fifteen years, and that of these nine-tenths have failed from bad planting and want of care.

I think there is but one way in which pears can be grown successfully, so as to equal the fruit raised by Cambridge and Brighton cultivators—and that is by high cultivation. The pear wants a deep, rich soil, not too wet and never dry. The trees should be partially sheltered, so as not to suffer by high winds, which injure the young and tender shoots early in the season, and blow off the fruit at a later period. The pear wants in the soil a plenty of manure, and also bone in some form. One successful cultivator has plowed in heavy dressingss of sheep's feet with decided advantage, it being a manure that will last for years. The common dressing applied by the best cultivators is about eight cords to the acre of horse manure in a green state, spread on in the fall and forked in the next spring, with an occasional dressing of ashes and bone. By this high manuring, with clean cultivation, and without raising any crop among the trees, those persons have succeeded in raising very fine fruit.

The Cambridgeport cultivators have their trees mostly on the quince bottom, planted about eight feet apart, and trimmed in pyramid shape. After the trees become established, they are summer-trimmed nearly as follows: in July, shorten the new wood one-half in length, and pinch back the new growth the rest of the season; this is considered the best way of pruning the pear on the quince, by many intelligent cultivators; on the pear root they are allowed to extend more and to grow into large trees. As to varieties, probably no two persons would agree, precisely; some varieties do well in any location, for instance, the Bartlett—others only in certain soils, as the Beurre Bosc. For market purposes, not only quality but outward appearance becomes necessary to make them sell well. A pear with a handsome yellow color, or yellow with a blush on one side,

or a pear covered with a yellow russet, sells the best; while a green-skinned pear is not so attractive in appearance, and does not sell nearly as well. As an instance of the effect the difference in appearance of this fruit has on the price, I find that the Belle Lucrative, one of the finest pears of its season, sells badly, owing to its green color, while the Duchess d'Angouleme, a third-rate fruit in quality, sells readily at high prices, owing to its size and beauty.

Most persons entering upon the cultivation of this fruit set too many varieties; they will succeed much better by planting only a few of the best kinds of well established reputation in the market, varieties that will grow vigorously, bear well, and the fruit of large size and handsome; if fall pears, kinds that will keep a few days without rotting at the core.

NOW AS TO THE GRAPE.

A variety of the grape to be worthy of general cultivation in Massachusetts should possess the following qualities, all of which are necessary to make it come up to what should be our standard of excellence:

First, it should be as hardy as an oak,—one the wood of which will winter without any kind of protection; a free grower, an abundant bearer, the branches large and with good-sized berries adhering strongly to the stem, so that they will not easily drop from the bunch, ripening early in the season, and not subject to mildew or blight. Added to the before-named requisites, the fruit should be of fine quality, as good as the varieties raised under glass, if possible. We have varieties combining all these requisites, except quality. That is to say, we have no hardy grape equal in quality to the varieties raised under glass, but still we have varieties of fine quality that are worthy of extensive cultivation, and I think no one of them more so than the Concord. Some of our horticulturists are raising seedling grapes, hoping to succeed in getting a better variety than we now have, and we shall undoubtedly get from them a superior variety within a few years.

For a long time many of our eminent horticulturists have attempted to improve our wild grape by hybridization with foreign varieties which are tender in our climate, hoping to get a variety combining the hardiness of the wild with the fine quality or the foreign grapes. These trials have all proved failures. They either prove to be not hardy, or are late, or subject to mildew or blight.

Recently, cultivators began to raise seedlings from some of the best native varieties, and have succeeded better, having raised some pretty good grapes—among them the Concord, Northern Muscadine, Hartford Prolific, Diana and a number of other kinds which are better than the original sorts. From these repeated attempts I think we may look for new and better varieties. I have seen two new seedlings raised in this way which I think are better than any of the above varieties, particularly as table grapes; they were raised from seeds of the Concord. One of them is very promising, in color resembling the White Nice, with a heavy whitish bloom, berries and bunch large, and without any foxy taste whatever; flesh rather firm, quality equal or nearly so to the foreign varieties. I have examined the original vine, which is now growing in an unfavorable location, shaded and crowded by other vines, never having had any protection, and not an inch of the wood has winter-killed, nor is there any mildew or blight, while near by this were other vines covered with mildew.

The question that has often presented itself to my mind is this: Is it an object to enter into the cultivation of the grape for the purpose of supplying the demands of the market? Good judges estimate that an acre of Concord grape vines, set eight feet apart, or four to the square rod, being 640 to the acre, will produce, the fourth year after planting, twenty lbs. of fruit to each vine, which would be 12,800 lbs. to the acre, which would probably be worth 10 cts. a lb., amounting to $1,280 per acre; deduct one-half, and still it would leave $640, which would pay largely for the cultivation and capital invested.

And for the purpose of wine-making, persons are willing to contract for large quantities of the Concord, at five cts. a lb. Of the manner of planting and general cultivation, I do not intend to say much, and will only add, that the grape is not very particular as to soil, if not too wet. Any soil sufficiently rich to bear fifty bushels of corn to the acre will be rich enough for the grape.

The location I regard as of much more importance than soil; and I mean, by location, a situation where the vines will escape the late spring frosts, which are much more destructive than the frosts in the fall of the year.

There has always been a large demand for good table grapes; that demand has increased very much within a few years, and is not one-quarter supplied now. The drawback to raising them has been the want of a good variety, that will ripen early in the season; but with some of the newly introduced kinds this is somewhat obviated. The prices at which hot-house grapes now sell, put them beyond the reach of persons of moderate means, except as a luxury. What we want is a hardy grape, equal in quality, if possible, to the foreign, to supply the wants of the whole community, at a low price, and so abundantly as to be within the reach of all. When we find such a variety, whoever in old Middlesex enters into its cultivation will reap an abundant reward for his labor. The new seedling that I have described comes nearer to this want than any grape that I know.

Of the manner of pruning, I will merely say that I have tried the various methods described in the books, and much prefer what is called spur pruning.

There are many farmers, and other cultivators, who think that a wild vine, taken from the woods, or some location where it has been uncultivated, and put into a garden under good cultivation, will immediately come up to the Concord, Isabella or Catawba, in size and quality, which is erroneous.

The size and productiveness will be somewhat increased, but not the quality; or if the quality is affected, only in a very slight degree. A gentleman living within ten miles of Concord, called my attention to a variety of grape exhibited by him, and grown on his farm, as something superior to any other grape, and remarked to me that there was "no grape equal to his, which grew away down in the corner of the wall." In the judgment of the committee on grapes, it was remarkable only in one way, and that was for its ex-

tremely bad qualities. I had the pleasure of presenting him a few Concords and Dianas, and he became satisfied that his was really no great thing after all!

For the New England Farmer.

ENTOMOLOGICAL.

MR. EDITOR:—Some time since I sent you specimens of an insect new to me, or at least rare heretofore in this region. As no description of them has appeared in the *Farmer*, I venture to send you this, hoping that from it some professional entomologist will be able to tell what they are.

Length to tip of abdomen 0.25, to tip of wings 0.40 long. Antennæ, black, hairy, erect, four jointed, 0.50 long. Head, small, brownish-black; eyes, small, brown; thorax, brownish-black, slightly hairy, 0.10 long; wings four, hairless; fore wings brownish-black, purplish in sun, transparent; veins at base, whitish, black at tip; conforming to abdomen, to tip of same, concealing hind wings; then erect, the under sides touching, 0.30 long; hind wings white, veins black, 0.15 long; legs, six, three jointed, hairy, brown; tip, with a single stout claw, 0.25 long; abdomen, conical, black, somewhat hairy, encircled by eight pale yellow bands from thorax to tip of abdomen. Found mainly upon the trunk and large limbs of many kinds of trees; only seen this year between Aug. 8th and 26th; then very numerous, coming and disappearing almost at the times named.

Are they a new enemy added to the already frightful list, or are they useful? S. A. N.

Georgetown, Mass.

REMARKS.—We received the insects sent by "S. A. N.," and some of the same from one or two other sources. They were quite numerous upon our apple trees, clustering close together, and upon approaching, or touching them, would rapidly diverge in every direction like the rays of a star, and in a few moments return and cover a spot not larger over than half a dollar. We wish to inform our obliging correspondent that we have made repeated application to such entomologists as we have access to, in order to learn the name and habits of the insects he sent us, but as yet without success.

RHUBARB WINE.—A correspondent of the *Prairie Farmer* who attended the State Fair of Wisconsin, says, the several specimens of pie-plant wine which we tasted were really delicious, wholesome, and much better than any "boughten" wine we get—even surpassing the best currant wine.

AGRICULTURAL REPORTS OF CALIFORNIA.—The Editor of the *California Farmer* complains roundly of this State publication. "The presswork is miserable, and when we come to examine the matter, we find it worse. The work abounds in errors, which are a disgrace to any printer, proof-reader, or editor," &c., &c.

For the New England Farmer.

FLOWING WITHOUT CONSENT.

MR. EDITOR:—One of the most important petitions for legislative action before the last General Court, it seems to me, was that in relation to the flowing of the Concord and Sudbury river meadows. The whole course of action upon this matter, and the final disposition of it, was looked upon with deepest interest by many persons not immediately connected with the petitioners, who are subject, like them, to similar or even greater evils, from a like cause, and equally anxious for some enactment by which property so exposed may be preserved from ruin.

Now, as no final action upon the matter was had before the adjournment of the Court, would it not be well to call a public meeting, at some convenient place, of all persons throughout the State, whose lands are affected by flowing, as are those on the Concord and Sudbury rivers, for the purpose of consultation and concert of action with reference to some measures for general protection and benefit?

The existing law, giving to mill owners the right to flow any lands, under certain conditions, is, I believe, a part of the old Colonial law of Massachusetts, enacted for the encouragement of saw and grist mills in the neighborhood of settlements, at a time when such conveniences were of the greatest importance. It could never have been intended to empower the immense manufacturing corporations of the present day to avail themselves of a privilege which is manifestly ruinous to the property of so many farmers and land owners in the Commonwealth. Nor could it have been anticipated that the grant of such a privilege would become so detrimental, as it is now known and acknowledged to be, to the public health, where large bodies of meadow land are annually flowed in this way.

We have the testimony of medical men to facts in relation to this matter, which are of serious importanse to the public. And we have been told by counsellors of the highest authority, that the existing law in this Commonwealth, in relation to the flowing of lands by mill owners, is essentially different from that in almost every other State, and much less favorable to land owners.

In common with many others, I should be glad, Mr. Editor, if you and others interested in the subject, would consider my suggestions, and if it is thought advisable, that a public meeting be called as early as possible, before the approaching session of the General Court. NORFOLK.

Nov. 12, 1860.

REMARKS.—We are glad to receive and publish this communication, and to learn that the Norfolk county people are looking to their true interests in this important matter. "Middlesex," we do not doubt, will respond to a call by "Norfolk," to hold a public discussion of this matter. Now is the time, while the weather is favorable, to bring out a large collection—and the time to prepare matters for the coming Legislature. The inhabitants of Concord river valley, and those of Norfolk county, have already spoken, and those of other localities, we know, are preparing to do the

same. The curse of flowing a man's land without his consent, rests heavily upon many of the citizens of Massachusetts. That curse must be removed, and we earnestly hope that every farmer in the State, at least, will help on the good work. Let us hear from Norfolk soon, and give notice of a public meeting.

For the New England Farmer.

EXPLANATIONS ABOUT SHINGLING.

MR. EDITOR:—Your correspondent wishes me to be more explicit as to my mode of shingling. I will try.

After laying the first course, I line with red chalk. Then I whitewash down to the line, or a little lower. I do not intend to put a nail more than one inch from the centre of the shingle. If the shingle is more than four inches wide, I put two nails in it and I do not intend to drive the nails down so as to sink the heads. I do not care how the nails are placed if more than one is used, whether one above the other, or side by side; but if side by side, not more than two inches apart. If the roof is boarded up and down, be sure that both nails—if you put in two—are driven into the same board. I have never been troubled with the snow blowing in through the roof, although I lay the roof as open as I can, and have good nailing for the shingles. After I have shingled I whitewash the whole roof.

My object in putting the nails near the middle of the shingle is, if the shingle is dry to keep it from huffing, and if the shingle is wet or green, to keep it from splitting. I am speaking of wide shingles. My object in not driving the nail quite down is, to hold up the butt of the next shingle so that there will be a free circulation of air.

If we were to sow a coat of slaked lime or fine salt, or both, over the roofs of our bulidings once in two or three years, it would add greatly to the time the shingles would last. I like to have my whitewash made with brine, or salt put into it.

Your correspondent proposes to run a straight edge. I have tried that, but you do not see as readily whether you are breaking joints well with it, as you do with a line.

ASHES ABOUT YOUNG APPLE TREES.

Now is the time to put ashes around young apple trees exposed to mice in the winter. About a half a shovel full piled up around the body of a tree has always been a sure preventive to mice girdling them even when set by the side of a wall. ED. EMERSON.

Hollis, N. H., Nov. 12, 1860.

AGRICULTURAL IMPLEMENTS.—The *Country Gentleman* notices the fact that the official tables of our exports published at Washington, throw no light upon the value of agricultural implements sold to other countries; for, strange as it may seem, while they descend to such items as "printing presses," "candles," and "combs,"—plows, horse-powers and hoes are left in the heterogeneous mass of "manufactures of iron," or "manufactures of wood."

For the New England Farmer.

SUGAR AND SUGAR-MAKING.

I have a camp on a side hill, 30 by 40 feet, with a wall on one side about 12 feet high. A cement cistern is situated in the bank above the camp by which the road passes. I have two haulers, or tubs, holding twenty-five 16 quart pails full each, with an India-rubber hose, one and three-fourths inches in diameter, connected with each hauler by a cast iron tube, made for the purpose. While gathering, I hook the other end on top of the hauler. I drive by the side of the cistern and let down the hose and the haulers are soon emptied through a strainer into the cistern. A one-inch lead pipe leads from the bottom of the cistern, through the wall, over the top of a cauldron kettle, with a faucet to draw sap out when needed, and also for filling. There is also a self-acting faucet of my own contrivance, which keeps the kettle just so full. There are three arches, with four pans, all passing around the cauldron to one chimney. The cauldron sets so as to have the sap 12 inches higher than the sap in the pans.

I use a syphon made of half-inch pipe, running from the cauldron to each pan, with the same self-acting faucet attached to each, that keeps the pans at the desired height all the time while boiling. After heating in the cauldron, I use the galvanized pans to syrup down and sugar off in. I have a crane to which is attached an apparatus for raising the pans on a level, so that I can easily take off the syrup without putting out the fire. But the greatest advantage is in sugaring off.

I usually sugar about sixty pounds at a time. When I first put in my syrup I build a good fire which will not need replenishing. As the sugar advances from one stage to another, I commence raising the pans from the arch, say four inches, then twelve inches or twenty-four inches, according to the fire, so there is no danger of burning, for a cool breeze of air will pass freely under the pan. I can then swing it off and let it down on to the floor, where I use a tray 2 feet by 6 feet, and a new hoe for stirring. My sugar land is mostly level, and I tap 1100 trees. I should prefer galvanized pans, 2 feet 2 inches by 5 feet 10 inches, in one sheet.

If any one wishes for more information I will freely give it.

MOWING MACHINES, ETC.

I bought one of Ketchum's mowers, the past season, and am well satisfied with it. I shall fix it so as to cut my grain next year. I use a one-horse power for threshing, also a circular saw, and I attached last June, what is called the lazy man's saw, on a new plan. It runs on a level and works well. It also runs a grater for making cider. I grate from ten barrels to fifteen barrels per hour. Also, I lead my horse in and wash every week. I can do a common washing for five or six persons in from twenty to forty minutes; I do not mean boiling and rinsing. It does not wear the clothes, though wristbands and collars need some rubbing. I am one for improvements.

Sutton, Vt., Nov., 1860. ERASTUS WAY.

LARGE CHEESE.—A cheese weighing 1,620 lbs. was exhibited at the Wisconsin State fair.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 7.

OWLS.

American Barn Owl—Cinereous Owl—Barred Owl—Long-Eared Owl—Short-Eared Owl.

The AMERICAN BARN OWL, (*Strix Americana*, Aud.,) is found throughout the United States, and is seen as far north as the 44th degree of latitude, but, according to DeKay, is more particularly a southern species, and is observed to be quite common in the Southern States, where it is resident. It so closely resembles the *Barn Owl* of Europe, *(Strix flammea,)* that it was formerly described as identical with it, and accordingly the history of both species was blended together. Its favorite food is meadow mice, and other small quadrupeds, swallowing them nearly whole, and afterwards expelling by the mouth, in small, dry balls, the hair, bones, and the other indigestible portions; this practice prevailing throughout the Owl tribe. The favorite places of resort of this Owl are hollow trees, in which it doubtless breeds; and it is sometimes found reposing in old barns; hence, probably, the origin of its name. Its European congener is famed for making old ruined castles, towers and churches its favorite haunts, from whence its savage cries at night give, to many minds, a cast of supernatural horror to those venerable, decaying piles of antiquity.

The length of this species is fifteen inches; breadth of wings, three feet, eight inches; the disk of radiating feathers around the eyes is remarkably concave and extended, rendering the physiognomy of this bird more remarkable than that of any other night-bird; whole upper parts bright tawny yellow, variegated with oblong spots of white, and finely sprinkled with whitish and pale purple; lower parts white, interspersed with blackish spots.

The GREAT GREY OWL, or CINEREOUS OWL, (*Syrnium cinereum*, Aud.,) though one of the largest and most formidable of the Owls, is but little known in this part of the country, it chiefly residing in Labrador, and around Hudson's Bay, occasionally retiring southward in the severe weather of winter, visiting us at rare intervals, but is probably more common in the northern parts of New England. Only one or two instances are recorded of its having been taken in this State. It is described as common in the desolate northern regions of the eastern continent.

It constructs its nest in the tallest trees, usually selecting evergreens. This Owl is thirty inches in length, and four feet in alar extent; color, grayish-brown, variegated with grayish-white on the upper parts, and with yellowish-white below. Like all the species of Owls yet described, it is destitute of ear-tufts, or "*horns.*"

The BARRED OWL, (*Syrnium nebulosum*, Aud.,) the American representative of the *Tawny Owl* of Europe, (*Strix stridula*, Linn.,) is described as one of our most common species by Wilson and Audubon, being found abundantly in various parts of the United States, particularly in Louisiana, according to Audubon, and generally seems to be more common in the Southern States than elsewhere, though resident in most parts of the country. It has been seen quite far to the north, and is said to be rarely met with in Northern Europe. It prefers the solitude of dense forests, breeding in trees, and laying white, globular eggs. "Its power of sight during the day," says Audubon, "seems to be rather of an equivocal character, as I once saw one alight on the back of a cow, which it left so suddenly afterwards, when the cow moved, as to prove to me that it had mistaken the object on which it had perched for something else;" yet the same ornithologist speaks of having seen them fly more than two miles, from one piece of woods to another, in broad daylight. The whole of Mr. Audubon's account of this Owl is very interesting, and I transcribe a single passage. "How often," says he, "when snugly settled under the boughs of my temporary encampment, and preparing to roast a venison steak, or the body of a squirrel, on a wooden spit, have I been saluted with the exulting bursts of this nightly disturber of the peace, that, had it not been for him, would have prevailed around me, as well as in my lonely retreat! How often have I seen this nocturnal marauder alight within a few yards of me, exposing his whole body to the glare of my fire, and eye me in such a curious manner, that, had it been reasonable to do so, I would gladly have invited him to walk in, and join me in my repast, that I might have enjoyed the pleasure of forming a better acquaintance with him. The liveliness of his motions, joined to their oddness, have often made me think that his society would be at least as agreeable as that of many of the buffoons we meet with in the world. But as such opportunities of forming an acquaintance have not existed, be content, kind reader, with the imperfect information which I can give you of the habits of this Sancho Panza of our woods."

This is an extremely noisy species, uttering its cries from all parts of the woods at the approach of evening, and in lowering weather becomes extremely vociferous, even in the day-time, and in the evening they respond to each other in tones so strange, that one might suppose some extraordinary fete about to take place among them; and their gesticulations when approached, are of a remarkable and very ludicrous nature. If shot at and missed, it utters its cry of *whah-whah-whah*, with much pomposity. Though the usual food of this bird is mice and small game, it sometimes attacks young rabbits, partridges and poultry.

There is much difference in the size of the males and females of this species, the male generally measuring sixteen inches and a half in length, and thirty-eight inches in extent; the female twenty-two inches in length and four feet in extent. Upper parts, pale brown, barred with transverse spots of white, and on the wings with dark brown and white; breast, barred with transverse rows of brown and white dots; belly, yellowish, streaked longitudinally with long stripes of brown, without ear-tufts.

The LONG EARED OWL (*Otus vulgaris*, Flem.,) observes Nuttall, "like several others of this genus (*Strix* of Linn.,) appears to be almost a denizen of the world, being found from Hudson's Bay to the West Indies, throughout Europe, in Africa, northern Asia, and probably China, in all which countries it appears to be resident; but seems to be very abundant in certain places in winter, following rats and mice to their retreats in or near houses and barns. They commonly lodge in ruined buildings, the caverns of rocks,

or in hollow trees." They are known to breed, however, in the tops of trees, often in the deserted nest of some other bird. It lays four eggs, nearly round in form, and pure white. This Owl is frequently seen abroad by day, but has nothing remarkable in its voice or habits.

This species is fourteen inches and a half long, and three feet two inches in extent; ear-tufts large, of six graduated feathers, black, edged with rusty yellow; upper parts, dark brown, sprinkled and spotted with white, pale, ferruginous, and dusky; throat and breast, clouded with rusty cream, and black and white; belly, beautifully streaked with large arrow-heads of black. A fine specimen of this beautiful Owl was taken a few days since in this vicinity.

The SHORT EARED OWL (*Otus brachyotus*, Cuv.,) is another species common to both continents. It is occasionally seen in England; is abundant in the forests of Labrador, and Sir W. Jardine speaks of having received specimens from Canton, in China. It is a bird of passage, coming to us from the north in November, and leaving us again in April for its northern breeding places. It feeds upon mice and other small game, silently watching for its appearance from some convenient perch, instead of hunting for it on the wing, as do most of the Owls. Wilson has the following observations concerning it. "It flies frequently by day, and particularly in dark, cloudy weather, takes short flights; and, when sitting and looking sharply around, erects the two slight feathers that constitute its horns, which are at such times very noticeable, but, otherwise, not perceiveable. No person, upon slightly examining this bird after being shot, would suspect it to be furnished with horns; nor are they discovered but by a careful search, or previous observation on the living bird." In England it is known as the *Woodcock Owl*, from its appearing at the same time with that bird; but in the extreme north of England, and in Scotland, it is known to breed. Jardine describes the nest as placed on the ground, among the heath; the bottom of the nest scraped until the bare earth appeared, on which the eggs were placed, five in number, without any lining or other accessory covering.

The length of this Owl is fifteen inches, breadth of wing three feet four inches, general color above, dark brown, broadly skirted with pale yellowish brown; beneath, yellowish, streaked with dark brown; tail long, rounded, crossed by alternate bars of dark brown and yellow ochre, and tipped with white. J. A. A.

CROPS IN ILLINOIS.—A correspondent of the Prairie *Farmer*, at Fair Haven, Carroll Co., writes that the threshing machines are disappointing the people this year just as much as they did last, but in a different way. Then every one expected more than he got; now every one gets more than he expects. People who expected 20 bushels of wheat to the acre get 25; those who expected 25, get 30. A part of ours has been threshed, and yielded 33 bushels per acre. Last year we had 17 bushels per acre, and the year previous but 6! and ours was a pretty fair average (I think) of this part of the country.

CIDER---HOW TO PREVENT ACIDITY.

Levi Bartlett, in the *Country Gentleman*, describes the stumming process (burning the cider with burning brimstone,) which he says he practiced many years ago with perfect success, thereby having cider which would exhilarate but not fuddle, nor produce headache:

There are three stages of fermentation to which cider is subject, viz.: the vinous, the acetous, and the putrefactive. When cider has passed through the vinous fermentation, if left unchecked it soon runs into acetous, and from this it soon passes into the putrescent fermentation, becoming ropy and worthless. Most of the cider put up by farmers passes into the second or acetous fermentation, becoming more or less sour and inebriating, and when drank, by many persons, producing a flushed face and headache, and what is worse, producing crossness and ill temper in many of those that use it as a common beverage, and guzzle it down in large quantities. It would be far better to convert all such cider into vinegar. This making of a man into a cider cask is poor business.

If new cider is fermented in an open cask, after a time, longer or shorter, depending upon circumstances, all the heavier portions of extraneous matter, pomace, &c., will settle to the bottom of the cask, and the lighter flocculent matter will rise to the surface, forming a spongy, brown crust. Just as soon as the vinous fermentation has ended, cracks or fissures will appear in the crust, and small white bubbles of carbonic acid will fill the fissures of the crust. The liquor at this precise time is clear and bright. The grand secret of having a cider equal to pure wine, is to check the fermentation. If the cider is left to itself, the acetous fermentation follows—the sedentary matter at the bottom of the cask rises, and the liquid becomes muddy—this, acting as yeast, produces a second and more violent fermentation, resulting in hard cider.

When the white bubbles begin to appear the crust should be removed, and the liquid drawn off without disturbing the sediment at the bottom of the cask. Pour two or three pailsful of the liquor into a clean, strong, tight barrel; then fumigate —that is, have prepared a long tapering bung with a looped wire inserted in the smaller end of it; in the lower end of the loop fix strips of cotton or linen cloth, dipped in melted sulphur, to form a good sized match, light it, and thrust it into the bung-hole of the barrel; the match will burn till the oxygen in the barrel is used up; then withdraw the match, put in a common bung, and tip the cask in "double quick time," to the right and left, so as to mix, as far as possible, the liquor and gas in the barrel; then fill it full, put in a tight-fitting bung, place it in a cool cellar, and in the course of a year or so, there will be a barrel of apple juice that "temperance" ladies and children can partake of without "a blush or a scowl."

ROUND dealing is the honor of man's nature; and a mixture of falsehood is like alloy in gold and silver, which may make the metal work the better, but it debaseth it.

SCIENCE IS KING.

We are often told, perhaps for the purpose of intimidating the good Republicans of the North and their electors, that the South will not sell us her cotton if Mr. Lincoln goes into the Presidential chair, and if they cannot have their way another four years; and moreover, that they will dissolve the Union, fancying that that will punish us worse even than cutting us off from their cotton.

But there is a *material* interest at present coming into existence, which providentially will make us quite independent, comparatively speaking, of the cotton crops of the Southern States. Southern politicians declare cotton to be king; and as they grow cotton, they fancy themselves the dictators of Northern interests, which they know are largely connected with manufactures. But SCIENCE is king—not *cotton* nor (as Broderick on one occasion boldly responded to one of those haughty Southern gentlemen) *gold*. Science and art are the sovereign rulers of our national greatness and commercial prosperity.

The cotton gin has made the South rich, important, proud and imperious. But the same Northern ingenuity that invented a *cotton gin* has also recently invented another machine calculated to make as great a revolution in our commercial affairs as the invention of Eli Whitney brought about in the culture and manufacture of the cotton plant. The inventive intelligence of a Northern man has now brought forth, and is perfecting the machinery for converting *common flax* into a fibre and staple as white, fine, soft and silky as any cotton grown in Alabama or Georgia. Besides, the operation of the machinery is so simple, rapid and effective, that an incredible quantity of raw material can be worked in a short space of time.

The entire North and the boundless West can raise flax at the cheapest rate; and in two years we should not be dependent on the South for cotton fibre, if necessity compelled our manufacturers to turn their encouragement to textile materials of pure Northern growth. We have been recently informed that one manufacturing establishment alone can use (judging from their practical experiments) this *flax cotton* as a mixture with their cotton fibre, so readily as to make a saving of seventy thousand dollars per year, over their present profits; and that, to do this, it is not necessary to alter their machinery or the shape of a spindle.

It is utter madness for the Southern States to think of national prosperity, internal security and domestic happiness, when disunited from these Northern States. The prosperity of the North would not be interrupted by the secession of all the slave States. National prosperity depends on agriculture, manufactures, and a mercantile marine. We lack in the North only one agricultural product to make us wholly independent of the South—that is a textile fibre fit for a substitute in our manufactures for their cotton fibre. We have it in flax, and it can be raised by free labor in the Middle and Western States, and in all temperate latitudes, cheaper than cotton can be grown by slaves anywhere on the earth. The inventive genius and the capital of Massachusetts have already commenced this vast agricultural and commercial revolution. Machinery has already been set up in several regions of the West to effect the first processes in the manufacture necessary to prepare the raw material for bleaching and reducing the flax into an almost silken fibre far more capable of receiving and holding colors than cotton.

Hundreds of acres will be added next year to this source of prospective industry and wealth. Thousands and millions will be added hereafter.

We shall not need so much cotton in a year or two as we have been in the habit of using; and if compelled to pay a very high price for it, and pay the cash in advance, we shall the sooner be disposed to encourage Northern agriculture and free labor. England will not be long in following our example; and if, in ten years from now, the South finds less use for her slaves, and is compelled to sell her cotton very cheap, and to beg purchasers wherever she can find them, even on the curb-stones of Boston, she will have only South Carolina to thank for the prostration of her great interest.—*Boston Journal.*

For the New England Farmer.

KING PHILIP OR BROWN CORN.

This corn has, in years past, been highly recommended in the Patent Office Reports. I procured some seed of it, three or four years ago. Hardly half of the seed was brown, the rest yellow. I have raised it ever since, but found that last year the corn was mostly yellow—but few brown ears. The brown ears I took pains to save for seed, and this year planted only the brown, but on harvesting it, as much as four-fifths of the ears are yellow. Is this the experience of others who have raised it?

Among the old sort of yellow corn that I raised several years ago, there would be a few ears entirely red. I have planted, in a piece by itself, this entirely red corn, and the produce was but a few red ears, the rest flesh color and yellow. The red, when planted in a field with the yellow, would not mix by the kernel—here and there a scattering corn, like other sorts; but the ears would be all yellow or all red.

THE POTATO ROT.

This year the long red potato rotted badly in this vicinity. Of a piece which I dug the last of October, from which I had eighteen bushels, but two bushels and three pecks were sound. About the same time I dug a quantity of the Jackson Whites, and all of them were sound—not a rotten potato among them. As for the Davis Seedlings, but few were rotten. White Apple potatoes also some rotten. Black potatoes escaped the rot.

I am satisfied, and have been for a long time, that the rot is caused by a blast upon the vines which causes a stagnation of the circulating sap, and hence putrefaction. I have perceived that when the potato leaves turn suddenly black, the rot soon follows.

A neighbor of mine, in August last, found that his potato vines were suddenly turning black. He immediately pulled up the tops and dug his potatoes. He told me the other day that they were all sound—not a rotten one among them.

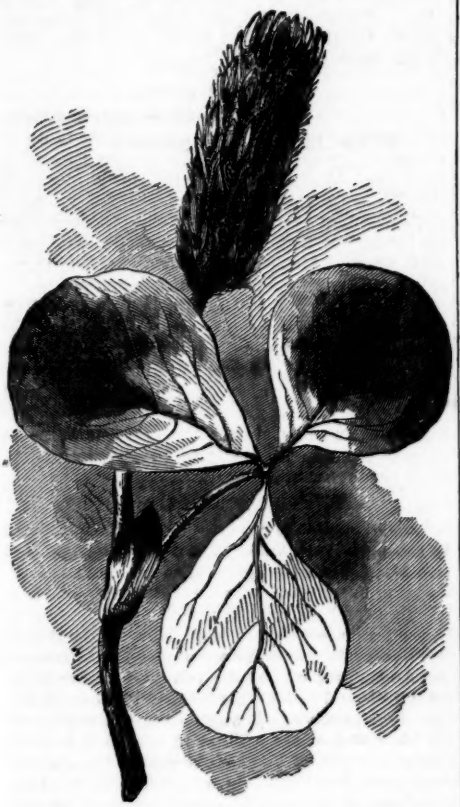
ISAAC STEARNS.

STOCK IN MAINE.—There are in the State of Maine 54,508 horses, 61,578 oxen, 132,645 cows. 374,095 sheep, and 45,923 swine.

THE CRIMSON CLOVER.

TRIFOLIUM INCARNATUM.

Early in November, a gentleman residing in Canton kindly brought us a specimen of this beautiful and fragrant plant, the first we had ever seen, and we were so much pleased with it, as to ask for a perfect specimen, which we have had sketched and engraved, and present the reader to-day. The sketching is truthfully made, while the engraving is artistically done, and of course attractive. If we could add the color and fragrance of the flower it would be complete.



In presenting some perfect specimens of the plant, the gentleman who called our attention to it addressed to us the following note:—

MR. EDITOR: — I send herewith a couple of stalks of what I believe to be the "*Trifolium Incarnatum*," or Crimson Clover. One authority says: "The crimson clover is now grown for soiling and hay, and is a beautiful Italian plant, sometimes cultivated as a border flower. Much attention is given to its cultivation at present in Scotland. Fulton's experiments in growing crimson clover attracted special attention from the members of the Highland Agricultural Society. A large crop was grown from seed sown by Mr. Fulton on land from which a crop of early potatoes had just been taken. Three months after it was sown, on Oct. 17, the yield was 2½ tons per imperial acre. He arrived at the following conclusion:

It is highly valuable as a secondary crop after early potatoes. It is an excellent intermediate crop to precede turnips.

It will withstand severe weather if well established before frost.

It produces an excellent crop of forage much relished by all the live stock of the farm.

Coming early to the scythe as a summer crop, 10 or 12 weeks after sowing, it may be produced very early in the season if wanted for stock."

The accompanying specimens were found near my house, in South Canton, where the seed was probably first sown by a former occupant as a garden flower. It grows quite luxuriantly, and at this late season, Nov. 2nd, while all other clover in the same field is withered, this is in full bloom, presenting, with its Crimson flowers, a beautiful appearance. Yours, truly,

J. MASON EVERETT.

Boston, Nov. 2, 1860.

We learn from a gentleman in the town of Concord, that a paper of the seed of this plant was sent him from the Patent Office, several years since, which he sowed on the edge of a corn-field. It grew luxuriantly, and while the corn was being harvested several horses and colts found their way to it, and were found quite reluctant to leave it. The gentleman gathered a large basket of the plants in the hope of saving the seeds, but they proved not to be sufficiently matured. The horses and colts were so attracted by it that they leaped the fences and fed it so closely that none of it appeared again.

ENGLISH FRUIT.—I attended one of the largest fruit exhibitions in the country at the Crystal Palace in London. The apples were not worth looking at. Pears about middling. Plums and nectarines very fine. Hot-house grapes were remarkably good, and a few fair looking peaches grown under glass, also some things they call melons, which would do very well to feed the pigs with in America. The fruits in England, this year, are not high-flavored, but poor and insipid. The sun does not shine hot enough there to grow good-flavored fruit, but they are not troubled with worms in the fruit, as we are.—D. C. RICHMOND, *in Ohio Cultivator.*

HOW TO MAKE A CEMENT FOR STOVES.—Take fine salt one part, and two parts of fresh hard wood ashes, mix well together, then take cold water, and mix into a mortar. Apply to the crack either warm or cold, and you will find a cement which will answer all common purposes, and found to be very useful where the stove-pipe joints are not as tight as is desirable.

STILL ANOTHER.—Take iron filings, and mix to about the consistency of putty for glazing, with white lead and linseed oil. Fill in the joints as securely as possible, while the stove is cold, and let it stand a day or two before using.—*Rural New-Yorker.*

A GOOD SOIL.

So much is said and thought of the superior fertility of the Western prairies, that probably but few of the farmers of New England, in counting up the mercies and blessings for which they ought to offer up special "thanksgiving and praise," on the occasion of the late observance of the Puritan festival, enumerated that of a good soil. It is, however classed, by the editors of the *Homestead*, with the following six special reasons why New England farmers should be thankful, viz.:—A Home in the Country—A Good Soil—A Country well Wooded and Watered—Fine Scenery—A Healthful Climate—Good Markets—The Blessings of Education, of Society, and of Religion—and upon each of which they discourse in the number of that paper, dated November 24, 1859 — the Thanksgiving Day of twenty-two States and one Territory. We copy their remarks on this topic, in the conviction that a mere *habit* of speaking of the sterility of New England—of its rock-bound coast and granite hills—not by farmers only, but by our orators and writers, has done and is still doing our soil great injustice; and that multitudes leave our hills and valleys, to learn, by dear-bought experience, elsewhere, how little they have gained by emigration, so far as respects soil alone.

A GOOD SOIL.

It may seem invidious to the dweller in the Western valleys, that we should speak of a good soil as one of the advantages of the sea-board States. Yet if we go back two centuries ago, when these States were mainly a wilderness, we shall find the settlers very much in raptures with the vegetable productions of these worn-out lands. Whether or not New England ever had so rich a soil as Ohio or Kentucky, is not now very easily determined, for we have no reliable statistics of the productions of our farms in colonial days.

It is a good soil, even now, after two centuries of persistent abuse, and abundantly rewards capital, labor and skill, wherever they are applied. We have very little, originally poor, arid land, and very little land now worn-out that will not pay well for reclaiming. The average product of corn to the acre in Connecticut is said to be larger than that of any State in the Union—a fact quite as complimentary to our soil as to our cultivation. Eighty to one hundred bushels are quite common among cultivators who use manure liberally, and with the skill and capital that are attainable in this occupation, we may make seventy bushels of corn to the acre, the average for the State.

We have within our own borders, if rightly distributed, the means of making our lands as rich as they need be. We have clay beds enough to make tile to underdrain every acre in the State that needs drainage, and muck enough to make our uplands as rich as a garden. The most of our farms have muck deposits within their own enclosures. The soil itself in most parts of the State, as the growth of forest trees bear witness, abounds in elements of fertility, and only needs skillful working to give an ample reward to the labors of the husbandman. It is also

A COUNTRY WELL WOODED AND WATERED.

Looking out upon the landscape from almost any of our hill tops, a large part seems still to be covered with forest. We are inclined to think that there is more woodland in the State now than fifty years ago. Since the introduction of coal, wood for fuel is cheaper in many of our cities and villages by twenty-five per cent. Almost every farm has a liberal supply of fuel and timber, and with good husbandry these may be perpetuated. These woodlands afford an important shelter to the cultivated fields; and it is doubtful if their extent can ever be much curtailed without injury to our agricultural interests.

We have, too, in all parts of New England, clear running streams and springs of water; water that it is a joy to look at as it leaps and foams and sparkles in the rivulets and brooks, or as it whirls and roars in the broader, deeper current of the river. One needs to see the turbid brooks of the Western valleys, and to taste the waters of their stagnant cisterns and wells, to appreciate that stereotyped item in the advertisement of a New England farm—"well watered." On the prairies you may go miles without beholding a water course of any kind, and hundreds of miles with no other sight than muddy water. Here springs gush up on all our granite hill-sides, and almost every enclosure of a few acres has its spring or separating rill, to allay the thirst of man and beast. The time is not distant when these idle brooks will be turned over the adjacent fields to irrigate them in drouth, and to add largely to their productiveness.

FINE SCENERY.

This of course is a matter of small importance to those who only value the soil for the crops that will bring silver and gold. But the number is increasing every year who have a higher standard of value, and appreciate a region as it ministers to the æsthetic wants of man. New England cannot boast of the sublime scenery of the Alps or of the Andes, but no country can surpass her charming hills and valleys, her beautiful lakes and rivers. One hardly needs to go abroad in pursuit of the picturesque, the wild, or the grand in nature. The mountains of Vermont and New Hampshire, and the hills of Berkshire and Litchfield draw their annual crowds of summer tourists, in pursuit of health and happiness. The valleys of the Connecticut, Thames and Housatonic, abound in charming landscapes, that, however unappreciated in youth, are certain to be cherished by the emigrant to the prairies and valleys of the West,—pictures of loveliness forever.

A HEALTHFUL CLIMATE.

We have a great advantage in this respect over the newer States of the South and West. There, diseases of miasmatic origin, chills and fever, are the lot of all, until they become acclimated, and with many, this period of trial never expires until they drop into the grave. Here, multitudes have almost uniform health, and many pass through life with no serious illness. In a parish in this State, one-third of the people born attain the age of seventy years, and this perhaps is not an over

estimate for the whole commonwealth. Certainly our climate is salubrious, and the man of good constitution and correct habits may cherish the reasonable expectation of good health and a green old age.

GOOD MARKETS

are another of our home blessings not to be overlooked in our view of the year. This would compensate for a much poorer soil than we have. The New England farmer has, within an hour's ride of his home, a hungry market for every product of his farm. There is little danger that anything will spoil upon his hands if he have enterprise enough to harness a horse, or yoke up his cattle. He is in the midst of a trading people, and can often sell everything that he has to spare at his own door. His hay and grain of course he will not think of selling, as they yield the largest profit when consumed upon the farm. But beef and pork, poultry and eggs, lambs, calves and sheep, cows, oxen and horses are always in demand, and there is no prospect of an over production while our commerce and manufactures continue to flourish.

In many parts of the great West there is indeed good soil and bountiful harvests, but it costs so much to send the products to market that the farmer has little profit of his labor. It avails little to have a fertile soil where wheat is worth but fifty cents a bushel, and corn but half that price; where the only sale of potatoes is at the starch factory at a shilling a bushel; where beef is three cents a pound and pork but four. These are physical advantages readily appreciated by all.

THE BLESSINGS OF EDUCATION, OF SOCIETY AND RELIGION,

are not less important, if less prized by the cultivators of the soil. The school-house and church are familiar landmarks in New England, conveniently situated to all. The academy, the seminary, and the college are within reach of every youth who hungers and thirsts after knowledge. These institutions have moulded our society, and made the mass of the people more generally intelligent and cultivated than can be found in any other part of the land.

One needs to travel in the sunny South, or over the prairies of the West, and mingle with a population that have grown up without free schools to appreciate present blessings. We who abide in New England, have always the privileges and enjoyments of good society within our reach. Neighborhoods exclusively bad, the resort of the vicious and idle, are almost unknown among us. Enterprise, intelligence, thrift, happiness and piety, are the prevailing characteristics of every community. For these things, farms a little richer or a little broader are no compensation. For these blessings let us give thanks to the Author of all good, as we come once more to the festal day of New England.

APPARATUS FOR SALTING SHEEP.—A correspondent of the Boston *Cultivator* writes: Last year I carried a large hogshead, for which I paid 38 cts., into the field and laid it upon the ground making it fast—one head having been previously taken out. I was careful to smooth off all protruding nails or rough substances liable to pull the wool. Then upon the inside of the other head I nailed a seven by nine box to contain the salt, and the work was completed—the whole costing in money and labor, about 50 cts., and so far as necessity is concerned, it answered a very good purpose.

AMMONIA---CHARCOAL---GYPSUM.

Ammonia is contained in snow, dew and rain-water, especially in the last when falling in the vicinity of cities. It is a principle highly advantageous and even indispensable to vegetable development, and is lost by evaporation unless absorbed and fixed by some substance capable of attracting and fixing it. That ammonia actually exists in rain-water as it falls from the clouds, in no inconsiderable quantities, is demonstrated by chemical experiments of a familiar and simple character. If a few gallons of water be carefully distilled, and the first few pounds distilled be mixed with a little muriatic acid, a very distinct crystallization of muriate of ammonia, or sal ammonia may be obtained, which crystals have an opaque or brownish color. If a small amount of sulphuric or muriatic acid be mixed with a quantity of rain water, and the mixture evaporated to dryness by boiling, the ammonia will remain as a residue, and may be detected by the addition of a small quantity of powdered lime, which, combining readily with the acid, sets the ammonia free, in which state it is immediately recognized by its pungent smell.

As a "fixer" of ammonia, common charcoal is probably one of the most economical and efficient articles known, as it possesses the power of absorbing ninety times its weight of ammoniacal gas, which it retains until it is freed, or worked into the soil by rains, where, no doubt, by the voltaic action of the spongioles of plants, it is conveyed into the vegetable system and circulation, and constitutes the principal source of nitrogen, which is recognized as so indispensable to the health of plants. Gypsum, or common plaster of Paris, as it is more popularly called, is also a good "fixer," and possesses a high value as an application on most soils. This is especially the case on those soils that are dressed annually with manures, which, in the process of decomposition, evolve large quantities of ammonia, which plaster serves like charcoal to fix and retain for the benefit of the growing crop.

As a top-dressing for grass lands, gypsum possesses considerable value, operating, as in the case of crude manures, to catch and save whatever fertilizing properties are in the rain, dews or atmospheric vapor. Few substances produce more obvious effects, especially if the soil to which it is applied is of an argillaceous or clayey constitution.

A late writer says, "In itself, simply considered,

we are not, perhaps, warranted in ranking charcoal as a manure, as it is a substance nearly or quite indestructible; yet it possesses the capacity of exercising the functions of such, and may be considered as an efficient *collector* of the food of vegetables in most of their modifications, during the entire period of their growth. The same may be said of gypsum or plaster of Paris. Of this article, there are in every 100 pounds, 46 pounds of sulphuric acid, or oil of vitriol; 33 pounds of lime, and 21 pounds of water. The first constituent, or sulphuric acid, manifests a strong affinity for alkalies. If we mix gypsum with urine that has become putrid, or with manures of any kind, in a state of fermentation, the ammonia, which under such circumstances is in a state of rapid evolvement, combines with the acid of the gypsum, and forms the compound known as sulphate of ammonia. In this state it is no longer liable to volatilization, and can no more be dissipated or 'fly off,' than granite or common salt; it is, however, a soluble compound, and will hence sink into the soil with the first rain.

"These facts, relative to the nature of the above substances, explain the utility of spreading gypsum, charcoal, and other similar substances, over the floors of our barns, stables and other outbuildings, as well as upon the surface of our unprotected manure heaps, and, indeed, in every situation where this valuable principle is engendered."

Formerly, the opinion was almost universal, that gypsum operated merely as a *stimulant*, but in his recent agricultural work, Professor Liebeg has presented an elegant solution of its action, and one which, we have no doubt, will be found perfectly correct. It will appear, according to his views, that the carbonate of ammonia known to be present in rain-water, and which is in itself an energetic agent in vegetable growth, is attracted and *decomposed* by gypsum and soluble sulphate of ammonia and carbonate of lime formed. As this salt of ammonia possesses no volatility, it is, of course, retained in the soil, and successfully economized for the use of the growing plants.

Both the above-named salts, however, are found to have a very advantageous influence upon the *humus* of the soil, and tend to advance its preparation for the crops that are upon it.

In all cases where putrescent manures are applied to land, the loss occasioned by the escape of ammonia, unless some substance is applied with it capable of attracting and fixing it, is supposed to be considerable—though some persons regard the loss as trifling. We are clearly of the opinion, however, that where manure is thrown into large heaps and permitted so to remain till it ferments, that it is often greatly reduced in value in consequence of the ammoniacal and other gaseous products being set free, and allowed to pass into the atmosphere during the process of fermentation, or "heating," as it is more commonly termed by farmers.

Dr. Dana makes some strong remarks upon this point in his "Muck Manual," to which we refer the reader for many facts of importance in the collection and application of manures.

GOLDEN DAYS OF NOVEMBER.

The autumn chill creeps over our years;
The autumn frosts on our heads are falling;
And beyond the winter of death and tears
We can hear, sometimes, the snow-birds calling.
White hairs upon the wrinkled brow
A truce to time will soon be waving,
While the scanty fruit on branch and bough,
But little fulfils our youth's large craving.
Thank God for a late autumnal smile
That kindles to flame the dying ember!
Sit down, old heart, and be pleased awhile
In these golden days of November.

Who says the best of our lives are past?
Who says that no more the angels love us—
While the heart of nature seems so vast,
And her kiss of peace is bending above us?
There's a soft warm mist on field and hill,
Where the Indian of this second summer
His spirit game is chasing still,
As he did ere the reign of the white new-comer.
Away from the happy hunting-grounds
Whose tribes his dusky legions number—
He comes, they say, when the echo sounds,
In these golden days of November.

Once more throw open the window-pane.
Ere to winter's blast we bar and close it;
Unfasten the heart for an hour again,
While the golden glory overflows it.
Sit down in memory by the streams
That dabbled our feet in the days so early—
When the budding germs of crimes and schemes
Crept under the locks so brown and curly.
Crawl out in the sunshine, crippled age,
Though a brighter sun you may well remember:
O, happy for you if your closing page
Be these golden days of November.

Is it Summer? No! the branches are bare,
And we listen in vain for the song bird's singing;
A calm—but a treacherous calm is in the air,
And forth will the winds like hounds be springing.
Creep in, old age, to your hearth again!
Shut down the sash and bar the shutter!
One autumn comes, but two will remain,
If we trust what childhood's heart may utter!
Let the night come down with the chilly haze—
Let the storm beat out the failing ember:
We have looked our last on the treacherous days,
The golden days of November. *Henry Morford.*

THE RED SPIDER.—The Michigan *Farmer* publishes the following recipe, discovered by Dr. A. Bush, of Detroit; twelve ounces common soft soap; three ounces (by measure) turpentine or camphine, mix well together. This is for six gallons of water, which must be stirred well together, and applied with a common garden syringe, or the same proportion for any quantity.

For the New England Farmer.

TUBEROUS ROOTS.

OR THE MOST IMPORTANT TUBEROUS ROOTS USED BY DIFFERENT PEOPLE FOR FOOD.

BY WILSON FLAGG.

I have carefully prepared from different sources the following abstract giving an account of some important facts concerning the use and culture of different edible roots. I will begin with the most important of all—

THE POTATO,

(Solanum Tuberosum,)

which originated, without doubt, in America. Prosperity and civilization have been developed in the Old World without acquaintance with the potato; but the universal diffusion of this plant among the inhabitants of Europe has produced a complete revolution in their system of agriculture, and has been the most important means of preventing those famines which formerly prevailed, before commerce had introduced a greater variety of resources. The exigencies of the poor are met by the culture of the potato, and since its introduction, no failure of this crop has occurred simultaneously with the failure of the corn crop. The root is an offset against the cereals, and Divine Providence, for the benefit of man, has provided that the conditions of climate which cause the failure of the one shall be favorable to the other.

Still the potato crop is so important in many countries in Europe, that great misery falls upon common people when it fails. This was felt most painfully some years ago, when the potato disease first appeared, when it was so general as to destroy almost the whole crop in Ireland, and so sudden as to find the inhabitants wholly unprepared for the emergency. In Ireland, potatoes and oaten bread are the common food, and when it fails thousands must perish; yet famines are by no means so frequent as they were before the cultivation of the potato. It is this root, which the earth produces so abundantly, that serves more than any other cause to keep down the prices of other products, and place them within the reach of the poor.

This plant is indigenous in the cold regions of the South American Cordilleras; and in the course of about two centuries it has spread in so rapid a manner, that it has become the general food of whole nations in different parts of the globe. Over all Europe, in Lapland, Iceland and the Faroe Isles, to 71° north latitude the potato is cultivated; also in the lower plateaus of India, in China, Japan, the South Sea Islands, New Holland and New Zealand. It is remarkable, however, that its introduction has usually been opposed at first by the inhabitants. Frederic the Great was obliged to compel the Pomeranians to accept this boon of Providence.

Nothing is certainly known concerning the extent of the native country of the potato; but it is certain that it was cultivated in the colder regions of the South American Cordilleras, before the discovery of America; it is equally certain that it was unknown to the Mexicans. Meyen, a German botanist, found it wild in two different places in the Cordilleras, but he does not believe it has ever been found wild in Mexico.

The colonists who arrived in Virginia in 1584 found the potato there; and ships which returned from the Bay of Albemarle, in 1586, brought the first tubers to Ireland; therefore, the statement that Sir Francis Drake introduced this root into Europe seems to be unfounded. When Drake, after one of his remarkable voyages, was honored by a visit to his ship from Queen Elizabeth, all kinds of fruit and food which that voyager had brought home with him were put upon the table. In the account of that feast all the dishes are named, but the potato is not mentioned. Thus the name of the man who brought this blessing to Europe has perished.

THE CAMOTA, OR SWEET POTATO.

(Convolvulus Batatas.)

The sweet potato is almost universally called *Camota* in the Spanish colonies. It is indigenous, like the true potato, in the New World, and probably also in the South Sea Islands. It was widely cultivated in the Sandwich Islands, before the arrival of the Europeans. It has not spread so widely over the earth as the common potato, because it requires for its successful culture a very high temperature. It is cultivated in all parts of the torrid zone, and beyond the tropics wherever the heat of summer is sufficiently great. In the Middle States of North America it succeeds well, but the roots are of a poorer quality than those which are raised further South.

The tubers are mealy and of an agreeable flavor and are preferred while they last, to the common potato, but their sweetish taste causes them sooner to cloy the appetite, and the preference is finally given to the latter, which is undoubtedly more wholesome as constant food. Meyen found excellent camotas in the valley of Arequipas, almost at the height of 8000 feet.

Two varieties of the camota are cultivated, the one with a yellow, the other with a white tuber. There is also a distinct species cultivated in the West Indies, the botanical name of which is Ipomæa tuberosa—each species being allied to the garden annual known as the Morning Glory.

Cambridge, Nov. 24, 1860.

For the New England Farmer.

HONEY BLADE, HUNGARIAN GRASS.

In a communication of mine in the Weekly *Farmer* of June 23d, which also appeared in the August number of the Monthly, page 355, under the above heading, I stated that I intended to pick out a quantity of black seed of the above grass to sow in drills by itself to see if the crop would produce wholly black seed. I did so, and would remark that the seed that I bought at the seed store of Nourse & Co., in Boston, contained but only about one-sixth black seed; of the other five-sixths the seed was yellow.

I took pains to pick out the black seed which I sowed in drills in my garden. It was sown the 16th of June. It began to head out on the 12th of August, and was harvested the last of September. It ought to have been harvested before, as the birds, particularly the yellow bird, had eaten up about one-quarter of the seed. On cleaning up the seed, after threshing, I found rather over half of the seed was black, the rest of a yel-

lowish cast. I found that before threshing it, some of the heads contained almost all black seeds, but not quite, while a few heads contained mostly yellow seeds. None but black seeds were sown.

I think this Hungarian grass is a valuable accession to our list of grasses, and is a profitable crop. The seed yields plentifully. Some do not approve of sowing it for hay as it has to be sown every year. So does oats. When it is sown other grass may be sown with it, for a future crop, the same as with oats. One of my neighbors sowed this Hungary grass the first of last June, and sowed also clover, herds grass, red-top and fine-top, (rather more sorts, I think, than necessary,) which appeared to take well, and looks now as if there will be a fine crop of hay on the piece next year. ISAAC STEARNS.

Mansfield, Nov., 1860.

EXTRACTS AND REPLIES.

PRICES OF CATTLE IN BRIGHTON MARKET.

In a late number of the *Farmer*, you quote the price of working oxen in Cambridge market at $80 to $175 per yoke. We, farmers here in Vermont would like to know how large those oxen are? All drovers here have their girting chains, and most of the farmers have a chain to measure cattle. Working oxen here that will measure six feet six inches, well matched, good, handsome bodied cattle, and good workers, our drovers tell us $75 or $80 is a fair price for. A little explanation on working oxen will be thankfully received. A SUBSCRIBER.

Post Mill, Vt., 1860.

REMARKS.—The oxen quoted as bringing $80 to $175, include those of the poorest character, and also those of the best that are taken to market. The prices of oxen vary widely as well as those of horses, according to their appearance, one pair girting the same as another bringing readily ten to twenty-five dollars more. It is not expected of the reporter to give the price of every pair of cattle sold; all he can do is to give the range of prices which they bring. Prices vary materially according to the weather, and several other circumstances, which are continually changing.

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TO RELIEVE CHOKED CATTLE—MANURES.

FRIEND FARMER:—Having noticed several different modes of relieving choked cattle, all of which I think to be inferior to my method, I will endeavor to explain how I do it.

Put upon the creature's head a rope or head halter, and draw the rope over the girt of the barn or some object which will raise the animal's nose as high as can be done while standing upon its feet. Then let two men take a smooth lever or sled stake, and standing one on each side of the animal, press it hard against the throat and carry it gradually down as far as possible, and the obstruction will be carried down into the stomach, and the creature is relieved. This method I have never known to fail, and it being an external application, is perfectly safe to both man and beast.

If Mr. L. Gage wants good milk for himself and his family, let him feed his skimmed milk and all other slops to his pigs, and feed his cows with roots to increase the quantity of milk; for I am confident that any kind of house slops injures the quality of the milk, if it does not injure the cow to which it is fed.

HOW TO MANAGE MANURES.

I wish to advance one idea on the saving of manure, which is simple and cheap.

It is not every farmer that has a good cellar under his barn, but every one should have a wheelbarrow upon which he can carry the manure from the stable into the barn-yard, and beginning on one side of the yard, dump one load in a place till he has covered the whole surface, or as much thereof as he pleases, then go over with another course in the same way, and so on through the winter, and in the spring he will find the droppings of the cattle well mixed with their bedding and the litter of the yard, and no unsightly heap under his stable windows.

If he has sheds for his cattle or sheep under which he can deposit as above, so much the better.

Orford, N. H., 1860. ARTEMAS.

REMARKS.—We shall be glad to hear from our correspondent again on any agricultural topics.

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SQUASHES AND THRESHING MACHINES.

MR. EDITOR:—I would inquire through the columns of the *Farmer*, the correct way of telling the male squash from the female, of the Hubbard, Marrow and other squashes, also of pumpkins,—and the correct method of planting, how many of each kind in a hill.

I raise yearly from six to eight hundred bushels of grain of all kinds, which has to be threshed in my barn, either by hand, or by hiring a horse-power machine, which leaves everything upside down, and carries off some money and a large portion of my grain, which I don't like. Now I would like to be advised which to do, to go on as I have done, or purchase a one-horse threshing machine, and do my own threshing? I have horses, and keep a man the year round. Do you approve of the one-horse thresher, and what can I purchase one of the best kind for?

AN OLD SUBSCRIBER.

Ellsworth, Me., Nov., 1860.

REMARKS.—You would be able to do your own thrashing conveniently with a one-horse thresher, with a somewhat heavy horse, say one weighing eleven or twelve hundred pounds.

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SUPERPHOSPHATE FOR APPLE TREES.

How much superphosphate of lime ought to be put around apple trees eight or ten years old? Which is the best, that or oyster shell lime, and how much of that? When is the best time to apply it, fall or spring?

Orange, Nov. 15, 1860. S. M.

REMARKS.—If your trees are thirty by thirty feet apart, you will have forty eight of them on an acre; if you add four pounds to each tree, it will give one hundred and ninety-two pounds per acre, which we should think would be very well for the first application. A much larger quantity would do no harm. We have never used it for apple trees, and only give you an opinion above, not experimental knowledge. The superphosphate is undoubtedly worth more than the oyster shell lime. A peck of the latter spread under each tree could do no injury that we can conceive.

—

COW HOLDS UP HER MILK.

I wish to inquire through the columns of the *Farmer* if there is any remedy for cows holding up their milk, as I have a valuable heifer that is nearly dry from that cause. C. P. BACHELDER.

Franklin, N. H., Nov. 6, 1860.

REMARKS.—Always treat the cow kindly, feeding and housing her well at all times, and just before sitting down to milk place before her a little sweet hay, a few carrots, or other roots, or a little meal and water, and she must be a very singular cow if she does not give down her milk as freely as you do the hay and roots. Try it.

—

EGYPTIAN CORN.

Mr. VESPER T. HUBBARD, of South Strafford, Vt., gives us an experience with this corn similar to those we have already published. He thinks it would require *two* seasons to grow one small crop of it.

For the New England Farmer.

THOUGHTS SUGGESTED BY THE N. E. FARMER, NOV., 1860.

Page 491—*Corn and Cob Meal.*—I have some fears that this article, (which gives the substance of a communication in the *Ohio Cultivator*,) may mislead some of the readers thereof, and more especially those who accept almost every statement which they meet with in print, as trustworthy, neglecting to bring every such claimant upon their belief to the test of reason, common sense, and well-established facts and principles. My fears of such an unfortunate misleading of some are based on two features of this article, one of which is that it has much more of the appearance of having been written by one who wished to make out a plea in favor of a foregone conclusion, or of the utility of grinding cobs, than of having been written to give an unbiassed testimony as to the facts which had come under the observation of the writer.

Another of the features of this article which has led me to entertain such fears as I have expressed, is, that some of the reasons alleged in favor of the use of grinding cobs along with corn are mere opinions, unsusceptible of proof, or favorable results attributed to the use of the mixture of cob with corn meal, which that mixture, in the quantity used, could have very little to do with. For example, it is stated "that cob meal is the safest and cheapest feed that is raised in Ohio." Now its *superior* safety, or its being "the safest" of all feeds, is a claim which *cannot* be proved, and is, even at a first glance, highly improbable. Had the advocate for cob meal been able to restrain his great anxiety to make out a strong plea in favor of his client—viz.: cob meal—he would have seen that he was only injuring the cause he had undertaken to plead by a statement so wholly beyond the limits of credibility, and so entirely unsusceptible of proof, as that which he made when claiming a *superior* safety for cobs above all other feed. If he had contented himself with merely saying that notwithstanding the opinion of several, that cob meal was not a safe feed on account of the hard, flinty, sharp scales contained in cobs, he himself had never met with any case in which damage seemed to have been done thereby, then he would have been within the limits of reason. This is the *only* testimony or plea in favor of the safety of cobs which any judicious or modest man would venture to make. No man of *such* a character would expose himself to the suspicion of mental unsoundness, or of a blind and overweening anxiety to make a sophistical plea in favor of a weak cause or claim, as must be done when any man attempts to make people believe that cob meal is "the safest feed that is raised in Ohio."

No man of sound mind or good judgment, would even venture to assert *confidently*, as the correspondent of the *Ohio Cultivator* has done, that cob meal is perfectly safe—much less that it is the safest of all feeding-stuffs. He would know that such a statement *cannot* be proved, and could not be accepted, by *wise* men, merely on the authority of his saying so, or of any other man's saying so. All that any sensible man would feel authorized to say in reference to this matter would be no more than this—that nothing had come under his observation, during his use of cob meal, which led him to suspect it as unsafe or productive of any internal injury or derangement in the animals using it. And even *this negative* testimony, a man who cared for his intellectual reputation would be rather reluctant to give, for he would know that any amount of such *negative* testimony would not avail to counterbalance even a single case of *positive* testimony going to prove that disease or death had really occurred from the use of cob meal; and *such positive* testimony he would know was on record, if a reader of agricultural papers.

But I must endeavor to be more brief in what remains to be said. Another of the reasons, alluded to in the foregoing paragraph, why we entertain fears of the reliability of what is said, by the correspondent of the *Ohio Cultivator*, in favor of the employment of cob meal, is this: he alleges that a large amount of the increase in the weight and value of the cattle fed on this meal is to be attributed to so *small* a quantity of it, as to be beyond the belief of any man of common discernment. It is said, for example, that "cattle that cost him $18 per head in the fall, brought him $45,69 after consuming only about twelve bushels, 70 pounds in the ear per bushel, ground and cooked." Now, even allowing what is claimed, that grinding and cooking doubles the value of the corn and cobs, can any sensible man believe that an increase in the weight and value of an animal which would make it worth nearly $28 more than it cost, could be owing mainly to the use of 12 bushels of meal, even if the weight thereof were 70 pounds per bushel? Every man of any discernment must see that *so great* an increase in the weight and value of the animal could not be due mainly to the feeding of *so small* a quantity of food as is, rather ambiguously, designated as "12 bushels, 70 pounds in the ear per bushel, ground and cooked."

In conclusion, let it be said that those who undertake to defend or recommend the practice of grinding cobs with corn, and of using the mixture in feeding cattle or other stock, have a task before them which requires that they should prove, to the satisfaction of men of sense, the two following propositions:

1. That the use of corn and cob meal is perfectly safe, notwithstanding all the testimony on record to the contrary, and notwithstanding the improbability that scales of very great hardness and of knife-like sharpness can go through the stomach without doing any harm.

2. That it is not a waste to pay for grinding a substance of no more value than so much wheat straw.

MORE ANON.

FROGS.—Somebody who has watched the amphibious creatures, says in *Chamber's Journal* that male frogs make the most noise, being furnished for that purpose with a kind of bladder in the neck, or double action bag-pipe; but then the voices of the females are the hoarsest and most aggravating. When, however, intent upon doing the agreeable, they have another tone of voice—soft, sweet and plaintive, like a bell heard in the stillness of a summer evening; from which some naturalists have inferred that it is only the married couples, and old maids and bachelors, whose

voices are so harsh and grating, the courting and honey-moon tones being pitched in a different key. Although frogs have no tailors' or milliners' bills, they follow the fashions in having a new suit every week or fortnight during the summer, and in casting off the old skin as frequently. They are admired as food not only by Frenchmen and gourmands, but by snakes, eels, pike, trout, aquatic birds, hawks, owls, moles and weasels. Those most esteemed by epicures, frequent deep, clear pools, and are not easily caught by hand.

For the New England Farmer.

PROFITS OF FARMING.

SIR:—The question, "Is Farming Profitable," I suppose has been satisfactorily determined, but nevertheless, I will add my testimony to that already given by abler pens. Last spring I obtained the use of a piece of land containing about 9000 square feet, which had never been plowed, and was covered with a strong growth of running blackberry vines and weeds. After it was plowed it was harrowed and manured in the drill with coarse horse dung; about the 1st of May it was planted with sweet corn and potatoes, reserving a small patch for tomatoes, &c., and notwithstanding I had to plant my corn over a second time, I have gathered this fall the following crops:

12 bushels potatoes, sold at 62c per bush.	$7,44
Sweet corn, at an average of 13c per doz.	8,00
String beans	1,00
50 cabbages, at 3c per head	1,50
Tomatoes	3,00
Total	$20,94

Besides other smaller products which help to prove that farming is profitable.

EXPENSES.

Manure worth $5, one-fourth used this year	$1,75
Seed, &c.	2,00
Total	$3,25
Value of crops	$20,94
Expenses	3,25
Profit	$17,69

This is not large, but it is very well for this town. I am fully satisfied with it, and shall endeavor to go on a larger scale next year.

GEORGE E. MITCHELL.

Somerville, Nov., 1860.

TO WALK OR DRIVE IN A STRAIGHT LINE.—The *Dairy Farmer* gives the following directions for "going straight," which, though familiar to most farmers, may not be to all:

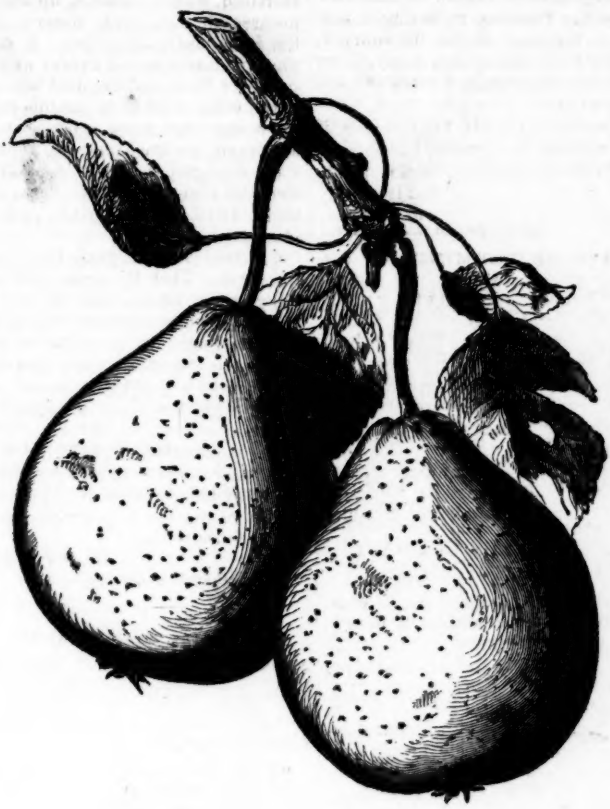
At the starting place, fix the eye in the direction of the stake, or other termination, and notice some object in the distance beyond, that is in range or line with the eye and stake. Go towards the stake, keeping the eye upon it, and the object beyond; and as long as the three are kept in range, the line travelled over will be straight, but as soon as the three are out of range, they indicate that the person moving has deviated from the straight line, and he may get back into line at once by bringing himself in range with the stake and distant object.

PACKING APPLES IN LEAVES.

A few years ago, Mr. J. W. Boynton, of East Hartford, while gathering up leaves under an apple tree, in the spring, observed beneath them a few fresh, unfrozen apples. It suggested at once that dry leaves would answer well as packing material for fruit, and the next fall and every season since he has used them for this purpose. We saw a few days ago some specimens thus preserved, seemingly as fresh and as piquant in flavor as when first gathered; yet he assured us they were varieties that would have decayed months ago if unprotected. His plan is to pick the apples carefully at the proper time, not to pack them until the forest leaves are perfectly dry and the weather quite cool. Then the apples and leaves are placed in alternate layers, and the last layer of leaves crowded in as close as possible by placing any convenient weight on the cover of the barrel. The leaves are of such elasticity that the whole may be compressed so tightly as to prevent all shucking, &c., and yet not bruise the apples in the slightest degree. In this latitude Mr. Boynton has never found it necessary to keep these barrels of fruit in any place warmer than an open shed. It would be advisable of course, everywhere, to keep them in as cool a place as possible. In the spring they are to be removed to a cool, airy cellar, or to an apartment especially for fruit, in connection with the ice-houses.—*Homestead.*

THREE VERMONT FARMERS.—One man in Richford has 900 acres of improved land, and besides summering and wintering 19 horses, 85 cows, 120 other cattle, and 55 sheep, bought in the spring of 1859, 120 head of cattle, pastured them through the season, sold them in the fall, and received $500 net for pasturing. He also had one and a half acres planted with French or Osier willow,—cut from the same six tons of green, equal to two tons peeled and dried. Cost of peeling and drying 2 cents per pound—worth in market from 5 to 2½ cents per pound. Another man in Sheldon has 300 acres of improved land, and besides wintering 10 horses, 21 cows, 2 oxen, 32 other cattle and 225 sheep, sold last season $650 value of horses, $600 value of cattle, $400 value of wool, $75 value of sheep, and $50 value of hay and other produce. A man in Enosburgh has 330 acres of improved land, and besides wintering $1,090 value of live stock, sold $2,500 value market cattle, raised upon his farm.—*Springfield Rep.*

SKIMMING MILK.—A country woman says: The wise man, in enumerating the times and seasons, made no mention of a time to skim milk; yet, nevertheless, there is a time,—a right time. too,—and that is just as the milk begins to sour in the bottom of the pans. Then the cream is all at the surface, and should at once be removed—with as little of the milk as possible. If allowed to remain until the acid reaches the cream it impairs it in quality. The housewife or dairymaid, who thinks to obtain a greater quantity by allowing the milk to stand beyond that time, labors under a most egregious mistake. Any one who doubts this, has only to try it to prove the truth of this assertion. Milk should be looked to at least three times a day.—*Rural American.*



THE DEARBORN SEEDLING PEAR.

On a comparison of our cut above, with illustrations of the same fruit in Downing, Thomas and Fields' works on fruits, we find a considerable difference in form. In each of these works, the Dearborn's Seedling is represented as *nearly round*, while our cut shows the fruit to be pyriform in shape, or rather inclining to a depressed pyriform shape.

The pears from which our engraving was made were taken from a tree standing in Mr. HENRY VANDINE'S grounds at Cambridge, by one of our firm, and were considered a fair average in size and form of those on a tree in full bearing. They were halved by the artist, and the outlines of the fruit accurately traced, and are as nearly true to their originals as a skilful eye and practiced hand could make them.

This pear is an admirable early variety, of first quality, raised in 1818, by the Hon. H. A. S. Dearborn, of Boston. It bears abundant crops in any fair soil, succeeding the Bloodgood, and preceding the Bartlett. Young shoots, long, dark brown. Fruit scarcely of medium size. Skin very smooth, clear light yellow, with a few minute dots. Stalk slender, rather more than an inch long, set with very little depression. Calyx with delicate, spreading segments, set in a very shallow basin. Flesh white, very juicy and melting, sweet and sprightly in flavor. Ripens about the middle of August.

CANADA CLIMATE. — The Montreal *Farmer's Journal*, in commenting on the practice, common in other sections as well as in Canada, of ascribing to unfavorable climate many failures which result from mismanagement or no management at all, says:

But let them talk of the climate of Canada as they please, it is more regular and steady than the climate of Britain. It is not so variable, though the winters are more severe and protracted, and the summers warmer; what we want is unstinted application of capital. With British appliances, we should hear less abuse of our Canadian climate.

For the New England Farmer.

MALE AND FEMALE SQUASHES, AND OTHER MATTERS.

"An old subscriber," writing in the last number of the *Farmer*, inquires relative to "the correct way of telling the male squash from the female, of the Hubbard, Marrow and other squashes, and also of pumpkins."

A squash or pumpkin is fruit, (of the vine, if you please,) and no fruit has gender, hence there can be no such thing as a male or female squash. Passing from the fruit to the seed that it usually envelopes, serving first as a nourisher to the same, next as protector, and finally, as food, as the germ within is unrolled and the younger plant appears, we likewise find no gender. Gender is not found in the fruit, is not found in the seed of any plant, but exists only in the floral development; in other words, the organs of gender are found only in the flower. It is true, that of some trees and vines, certain seed give trees or vines that will yield only male flowers, (the pomegranate is an example among trees, and sometimes the grape vine among vines,) and for theory's sake such seed may be termed male seed, yet practically the distinction is without a difference, or vegetable anatomy has not explored to the depths at which so nice a structural distinction lies.

Among all the trees of the orchard, and in most of the products of the farm and garden, we find the male and female organs present in the same flower, the fine threads in the middle of flowers being the organs, the one or more in the centre being the pistil or female, and those surrounding the stamens, or male organs; but the squash family is an exception to this general rule; hence we find the male and female organs in different flowers, though on the same vine. The flower containing the stamen appears first, growing on very long stems and are generally called false blossoms. These can readily be determined by a single undivided shoot in the centre, sometimes called by children the "candle." Such blossoms can never produce squashes, and yet without the aid of these blossoms no squashes can be produced, as from them come the pollen by which the female or staminate blossoms are fertilized. The female blossoms will be readily recognized by having the centre piece divided in six or eight parts, also by the embryo squash beneath it. This much on "male and female squashes."

Many questions have occurred to me while cultivating squashes, relative to their laws of development, of all of which I may affirm that I have found more pleasure in the endeavor to determine them by careful experiment than in drawing on the experience of others; but as to enjoy such pleasure alone is rather selfish, I propose two or three for intelligent, careful experimenters, premising that, as experiments, even after our greatest care, may still, in their results, look in the wrong direction, by reason of certain conditions that are not fully considered, or, it may be, wholly overlooked, therefore we draw our conclusions only after three or more repetitions of the same experiment, a consideration which would throw out many a crude, deceptive result, which, when brought before the people, only confuse or teach error.

Experiment No. 1.—We are sometimes told that if the end of a squash vine is nipped off near a young squash, the growth of the vine being checked, its vigor will go into the fruit. It will be found that, sometimes, one succeeds in greatly increasing the fruit by this process, at other times he meets with a total failure. Now it would be an advantage to know the conditions of success. It may depend on the degree of vigor in the vine, or what is more probable, on the size the young squash has attained, it being stricken with paralysis if very small.

Question No. 2.—Many farmers hold that old seed gives more squash and less vine than newer seed. Is this so, and if so, what is the greatest advantage obtained?

Question No. 3.—There is a theory in the community that seed from the stem end of squashes will yield a different product in form or number from those taken from the other end of the squash, the calyx end. What is the difference, if any?

Question No. 4.—If the seed are equally mature or of equal size, will the largest seed in any particular squash produce a better crop than the smallest?

These questions might be indefinitely extended. Some may say that to be so minute is to be foolish, but I believe that the high standard of agriculture of our era requires just such minuteness, just such thoroughness.

JAMES J. H. GREGORY.

Marblehead, Mass., Dec., 1860.

PLOWING BY STEAM.—At the St. Louis Fair a machine, invented and manufactured in the State, was put into operation and demonstrated that plowing can be done by steam. The *Valley Farmer* describes it as—

"A large Locomotive or Steam Wagon, having four large broad wheels, propelled by a small steam engine located on the wagon, and to this wagon a gang of six plows was attached. The wagon moved on, drawing after it its train of plows, in ground baked nearly as hard as brick by the long severe drought. It would have been impossible to have plowed the ground by any ordinary team. One of the plows was broken by the hardness of the ground, but the other five were forced through the earth, doing the work as well as could be expected under the circumstances. There was no breaking of the machinery, there was no failure in the work—the plowing was done successfully at different trials. A ditching machine was attached to the steam wagon—the plows having been taken off—and excavating was done more rapidly than we ever saw it done before."

PANS OF MILK.—The Connecticut *Homestead* republishes from an old Genesee *Farmer* an account of three carefully conducted experiments for the purpose of determining whether more butter is obtained from a given quantity of milk when set in pans partly filled than when full. Contrary to the expectations of the experimenter, from the same quantity of milk in the full pans, some three or four per cent. more butter was obtained than when set in pans half full.

For the New England Farmer.

HOW TO SALT AND PRESERVE BEEF AND HAM.

Will you, or some of your correspondents, give a receipt for curing beef so that it will be as sweet next summer as that put up by the Philadelphia packers? N. S. C.

West Tisbury, Nov., 1860.

Another.—I would like to know if you, or any of your subscribers, can give me directions for salting beef, to have it keep through the summer. By so doing you would much oblige

H. G. GOODRICH.

St. Albans, Vt., Nov., 1860.

REMARKS.— We have selected the following and submitted them to a notable housewife, who pronounces them good.

SALTING BEEF FOR SUMMER USE.

16 qts. of salt, and
4 oz. of saltpetre, for each
100 lbs beef.

Rub the pieces all over with salt, and pack it in edgewise, and after a layer is completed, take an axe or maul and pound down solid. Then sprinkle on a little saltpetre and fill up all interstices with salt, and so on until the cask is full. Those who do not like saltpetre may omit it without injury to the meat.

Mr. A. WANZER, who communicated this recipe to the *Albany Cultivator*, says he has salted his beef in this way for fifteen years, that it needs no soaking before boiling, and will be tender and sweet the year round. By this way of salting it makes its own brine, and never wants repacking, nor the brine scalding. If the brine should not cover it in the spring, sufficient may be added for that purpose.

Take a barrel and turn it up over an old pan or kettle, and burn cobs or hard wood for seven or eight days, keeping water on the head of the barrel to prevent its drying.

Make a pickle as follows:—

6 oz. of saltpetre,
2 qts. of molasses,
3 gallons of water, for each
100 lbs. of ham.

Boil and skim the pickle thus prepared. Pack the ham in the barrels, and when the pickle is cold, pour it on to the meat, and in four weeks it will be excellent, very tender and well smoked.

Another.—Make a pickle as follows:—

5 pts. of molasses,
5 oz. of saltpetre, and
3 gallons of water, for each
100 lbs. of beef or ham.

Boil these over a gentle fire, and skim off the scum as it rises. Pack hams with the shank end downward, and when the pickle is cool pour it over them or the beef. They will require to lay in the pickle from two to six weeks, according to the size of the pieces and the state of the weather—as they require to lay in the pickle longer if the weather is cold.

THE PUTRIDITY OF WELLS.

An article the *Homestead* of a week or two since, in regard to the restoration of Mr. Snow's well, which had become putrid, recalls to mind an experience of our own in curing a similar trouble.

We had a well of beautiful water, soft and cool, which all at once began to taste and smell as if the dead body of some animal were undergoing the decaying process in it. We gave it a thorough examination by the aid of the looking-glass, but could discover nothing. We descended to the water, but found no animal or vegetable matter in a putrid condition, and we were forced to the conclusion that the water was of itself putrid. Having reached this conclusion, we set our wits at work to devise a remedy; we remembered that only still water became thus affected, and that running water never became so. We thought the reason of the continued purity of the latter must be because of its continued agitation bringing all its particles continually in contact with the atmospheric air when it absorbed the oxygen to the necessary degree for reinvigoration of any property lost in sustaining its teeming, infinitesimal life. Upon this thought we based our action and remedy. We hired a man to work thoroughly the chain pump in the well, working with all his might for two hours, during which time he scarcely diminished the depth of the water. It was not longer than twenty-four hours before the water was as sweet and good as ever. We believe that it was the thorough agitation of the water by pumping, extending to the very bottom of the well, that effected the cure.

Again, we now have a cistern filled with rain-water from the roof, which passes through a filter in reaching the cistern. A week ago the water in the cistern became putrid, tasting and smelling, we can't tell how bad. We remembered the experiment with the well, and the supposed reason of its cure; so we procured a long pole, and thoroughly stirred it up, agitating the water as much as possible, perhaps working at the job fifteen minutes. In twenty-four hours the water was sweet and wholesome again.

These facts in our experience lead us to the conclusion that Mr. Snow's well, an account of the restoration of which has led us to pen this article, was purified more by the agitation of the water by the bag of charcoal being pulled up and down in it, than by any influences of the coal itself.—*Homestead.*

STRAW WORK.—The California *Farmer* congratulates the women of that State on the recent introduction of the Nonpareil wheat, from the straw of which the famous Italian straw bonnets are made, known as Tuscan straw, and predicts that "tens of thousands of dollars now sent out of the State for straw bonnets will be given to our own women for labor."

For the New England Farmer.

PREMIUMS AT AGRICULTURAL FAIRS.

WHAT THEY SAID UPON THIS SUBJECT AT THE CONCORD FARMERS' CLUB.

JAMES P. BROWN said the man who presents some new and useful plant or implement, or who takes pains to raise and train a fine animal, should receive the premium, and be encouraged, rather than one who obtains something accidentally. The man who has, with great care and pains, raised a pair of oxen, and got them well broken, should be rewarded, rather than one who has been to Brighton and found a good pair ready for work. There has been good reason for complaint in this particular. In too many instances, the men who can tell the largest story gets the prize. Full statements in writing should be required. It might be well that they should be made under oath. The whole process by which any article or animal has been produced should be stated, so that others may be benefited. He has known instances in which a good deal of deception has been practiced. Sometimes, men have bought articles and exhibited them for premiums. This is wrong. The man that would do this should be debarred from ever taking a premium afterward. When a premium is offered for the best managed farm, full statements should be required of the various crops raised, with the methods of cultivation, and an exact account of family expenses.

Mr. A. H. WHEELER said premiums are now withheld from many objects to which they were formerly given, as orchards and farms. There are not premiums enough given to encourage the invention and perfection of agricultural implements, as plows, mowing machines, &c. Premiums might be profitably given for crops raised in different ways. A premium for the greatest number of pounds of grass on an acre, at one or two crops, would stimulate effort. Premiums should be given for the best dairy, rather than for the best cow. Statements should show the income of the dairy, and the process of making the butter and feeding the cows. He has an idea that premiums are sometimes given to the man, rather than to the article exhibited. He does not think the object of the State, in giving $600, to be awarded in premiums, was to favor individuals. He thinks that, at plowing matches, premiums have been awarded for the work done by a certain plow, rather than for the best plowing.

E. WOOD, Jr., said it was impossible for committees to satisfy all competitors. The Trustees appointed the best men they could get, on committees. They must take men from different towns. He was present at the last meeting of the Trustees of our County Society, and he knew that pains were taken to put the best men on the committees. Many think that injustice is done them, because they do not get the premiums. The Trustees would be glad to give more premiums, if they had funds. He thinks premiums should be given on farms. This would give opportunity to make valuable statements, and would afford a basis on which to make a report. The Secretary could not make an interesting report without statements. If $25 or $50 were offered as premiums on farms, it would bring out statements on farm management, on draining, manures, &c., that would be worth more than anything else. Such statements would be the first things the farmers would read. He had been looking over the Essex county report, and found valuable statements on farms, sheep and root crops. Our Society is losing ground by not paying attention to these subjects. The society above referred to, reports more than thirty bushels of wheat to the acre. He believes these reports to be honest. He is sorry the premiums for spading have been discontinued. This was an interesting part of the show, and it is an important farm operation, especially among trees. One-horse mowing machines will come into use, and premiums should be offered to encourage them. Why should not the man who makes the largest quantity of good manure from the least stock have a premium? We do not make as much manure as we might. He carts into his cellar a great deal of material to absorb the liquid manure. But to-day, he easily found two hogsheads full of urine. A premium should be offered for the best management of manure.

The President, MINOT PRATT, said he had sometimes thought the statement should be the subject of the premiums rather than the article. He inquired if making the show popular should be the object aimed at? If so, horses would draw better than anything else. E. WOOD said if we had a large track, the trotting and racing of horses would attract more attention than all other things exhibited. He thought the track of the Middlesex Society was just right.

The Secretary, Dr. REYNOLDS, said premiums should be given to encourage those things that need encouragement. At the present time, the raising of wheat, the renovating of exhausted pasture lands, the best methods of feeding milch cows, upland draining, the best modes of applying manures, and the kinds of manure for particular crops, are among the subjects demanding attention. Objects that no longer required encouragement might be dropped, and the premiums offered for those that do need it. The offer of premiums would awaken attention to the subjects for which they were offered. He thought this principle should always be kept in view, in offering premiums. He had observed that some men wanted premiums offered for such things as they raised in high perfection, as they would then have a good chance to get them. He understood that the State offered premiums to improve agriculture in those particulars in which it is deficient, and not to encourage those branches that do not need it, that are now nearly or quite perfect. Premiums were offered for foreign stock to impove the breed of stock, because it needed it, and it was believed that it might be improved.

They offered premiums for plowing, to improve the plows and the modes of tillage.

They offered premiums for fruit, to improve the kinds and increase the quantity, and this had been the effect of them. There had been a great improvement in all these respects.

If we had arrived at a good degree of perfection in these and other branches of husbandry for which premiums had been given, we should now attend to other things in which improvement was more needed. We should not continue to give premiums merely because they *have* been given, but should vary them from time to time, so as to call the attention of the farmers to those things that are falling behind, or to which it is believed they

might profitably give more attention. He had observed in the report of many of the county societies that premiums were given for objects that were entirely neglected in this county, such as farms, sheep, field crops, soiling, manures, and many others. These subjects enabled committees to make reports that embodied their experience and observation, and were of great value. He thought a committee to visit farms, if they were the right men, would do more to add members to the society, and to awaken an interest in agriculture, than the amount of money required to pay their expenses would do in any other way. Indeed, he believed money expended for this object was the best investment the society could make. The Trustees of our societies should inquire every year, what particular department of agriculture needed special attention. When the reception of premiums became a mere matter of money-making, the object for which they were designed was no longer secured.

THE COTTAGE UNDER THE HILL.

No lordly elm trees are swaying there;
But the rustic oak and the cedar fair,
That grow by the winding rill,
Their tall heads wave on the summer air,
O'er the cottage under the hill.

The robin loves at the twilight hour,
Ere he flitteth away to his resting bower,
His evening song to trill;
And the wild bee sings from the violet flower,
By the cottage under the hill.

The wild vine hangs from the moss roof low;
And always with a motion sweet and slow,
As over the grass so still
The western zephyrs softly blow,
By the cottage under the hill.

When the shades of night creep o'er the lea,
Three prattlers group round a strong man's knee,
And their eyes with weeping fill,
As he telleth of her who sleeps under the tree,
By the cottage under the hill.

No gold or silver are stored within,
But a crowned monarch would sigh to win
The peace so holy, still,
That bodeth far from the court of sin,
In the cottage under the hill.

WHEAT IN NEW HAMPSHIRE.—From the *Journal of Agriculture* we publish the following paragraph in relation to the growth of wheat in the vicinity of old Dartmouth.

"Col. Culver, of Lyme, has grown on six acres of fall sown wheat, 180 bushels, and on three spring sown, 120 bushels. The Town Farm, in Hanover, on a field of six acres, produced 226 bushels. John D. Bridgeman raised, on a little less than two acres, 96 bushels; and Elijah Tenney, East Hanover, from three bushels seed, on 2¼ acres of soil, grew 125 bushels of nice spring wheat."

COST OF MARKETING.— Gov. Kirkwood, of Iowa, in an address at the Muscatine County Fair, stated that it cost him about 20 per cent. to market his beeves; 40 per cent. on wheat, 60 on corn and 4 per cent. on wool.

POOR MILKERS DRY UP COWS.

The great importance of having cows properly milked is very forcibly illustrated by the facts stated in the following article, copied from the *Boston Cultivator:*

When I first commenced farming, I milked all my cows with my own hands; and the result was, that no one in the town could boast of having made more butter, according to the number of cows, than we. I well remember of having a very noble cow for milk, which would fill a twelve-quart pail twice a day; and that a friend while visiting us was anxious to milk her. As I was well aware of the bad results of permitting a poor milker to milk cows that are accustomed to be milked by one faithful, regular hand, I *unwillingly* consented that he might milk her. The result was that he obtained about one-quarter *less* milk, than she was accustomed to give; and although I tried, faithfully to draw more milk, after he had finished milking, my efforts were in vain; and it was several days before I could obtain from her the amount which she had been accustomed to give.

My manner of milking was to milk as fast as possible, until a cow was milked entirely clean. I was obliged, at one time, to stop milking for only a few minutes, and I found that the cow had drawn up her milk, and I could not get it that evening.

His manner of milking was very slow and easy; and after he had been milking about as long as I was accustomed to be in milking her, she withheld the remainder, and nothing that I have ever heard of, would induce her to let it down again. This taught me the importance of employing one steady regular hand at milking.

In the seasons of 1858 and 1859, my wife complained very much, when I did not superintend the milking, that we did not get near as much milk as when I was there to attend to it. Of course I could not always be there, at milking times.— Then the milking would devolve on a young man in my employ, who *could* milk as well and as quickly as myself, when he had a *mind* to do it. But as he had inherited almost every characteristic of the human race, but the faculty of *pleasing*, or of trying to please, or of making himself agreeable, even in the society of cows, when I was not there, for the slightest offence he would fall out with the cows and beat them, and have them all in commotion. Then, of course, they would not give down their milk; for a cow has complete control of it, and she will not give it to a being that she hates. All that could be said to him about being gentle with them, and milking fast while he did milk, and keeping his finger nails cut short, &c., had no more good influence than this communication will have on hundreds of other boys in their boyhood, who think they will make cows and everything else obey their commands.

In the spring of 1859, my wife insisted that I should do the milking. I attended to it as long as was expedient, and then told this young man that he must attend to the milking and try to do it right, and to have no difficulty with the cows. Well, in less than two days, my wife said, "What is the matter with the cows, that we get only about half as much milk as usual?"

The truth on the subject is, cows know much

more than some persons think they do; and they will not love a milker who has nothing lovely about him, and who will not treat them kindly; and they will give him as little of their milk as possible. S. EDWARDS TODD.

Lake Ridge, Tomp. Co., N. Y.

For the New England Farmer.

HOW TO SAVE MONEY.

MR. EDITOR:—I thought I would solve the mystery of money-getting on a farm for a woman, and enlighten the mind of Miss Sallie. She says, by her own exertions she has partly managed to get an education for herself, and now inquires how she can earn money. I am somewhat surprised at such an inquiry from her, but nevertheless will try to elucidate the point.

In the first place she must have prudence and industry, without which she cannot get money off or on a farm, as money in the hands of a spendthrift is of no account.

My own experience in living on a farm is to the point. When a mere child I had money to loan that I had earned. My father had a large family that I helped to bring up. I had not only money enough for my own but other's comforts, all out of my earnings. Sallie says she has partly educated herself; that is very well; the expenses of a school education were mere trifles to me.

For twenty years last past I have lived in a city; but now I am on a farm laid up with a fractured limb by being thrown from a carriage. It is more than a year since the accident, and I cannot now take a step; but since I have been able to sit up, I have earned plenty of money by merely braiding palm leaf hats at four cents apiece. I have bought all I want, and scarcely know what to with the surplus.

Industry and prudence well carried out will work wonders. I often see, as I sit by my window, a woman riding in her own carriage, which was bought by palm-leaf hats made by herself at four cents apiece! What does Sallie think of that? Prudence and industry startle young America. She must have instead the skating-park and the race-course, where the young woman prepares herself for a wife and mother with sprained ankles and perverted tastes.

A FARMER'S DAUGHTER.

N. H., Nov., 1860.

AN OLD APPLE TREE.—At the late exhibition of the Hartford County Horticultural Society, a basket of apples from Mr. D. F. Robinson bore the following label:

"*English Pearmain from Charter Oak Place.*—The tree from which these apples were gathered is said to have been planted by George Willys, the original proprietor of the estate, about 224 years ago. Though tottering, it has yet strength—trembling at once with energy and age. New, but vigorous branches, amid a few withered hands that still stretch out, continue to shoot from its dilapidated trunk, as if it hated to yield its life, and clung, monument and memorializer of the sturdy hands that planted it."

For the New England Farmer.

HABITS OF THE WOODPECKER.

Much has been published recently in the agricultural, and other papers, in relation to the merits and demerits of the woodpecker. None of them come quite up to my impressions on the subject. Did the woodpecker confine its operations to the seat of the borer, near the roots of the apple tree, there could be no doubt of the merits of its labor. It may be that, sometimes, in search for the worm, sad havoc is made on the bark and wood, but generally their billing and boring cannot but be beneficial. But the bird does not confine its labor to the seat or retreat of the worm. It perforates the smooth bark of the tree in a succession of rings from the ground up, into and among the branches. The closest scrutiny cannot discover any traces of worms in or about the holes in these rings. It used to be said, and may be so still, that these birds are sap-suckers, and that these perforations are made to extract sap from the tree.

It has been said that these woodpeckers or sap-suckers select the bodies of the sweet apple tree as affording the most acceptable juice. The facts, as I have investigated them, do not warrant such conclusion. It is true, the bird makes selection of the tree it operates upon, but I could never discover that it had any connection with the character of the fruit it bears. Watch the labors of the bird, and you cannot discover any appearance of its tasting the sap if any ooze from the wounds. It drills the holes an inch, more or less, apart, with diligent haste, without stopping to suck sap or search for worms. Sometimes it appears to be a mere amusement of the bird, and with no object in view. Probably, however, it is obeying an instinct of the species to make holes for the use of the insects for the deposit of their eggs, and for the future feasting on the grubs by the provident depredator. Such was the opinion impressed upon me in my boyhood; and in my youthful sports many woodpeckers found their death in obedience to instruction to save the orchard.

The instinct of birds is a curious speculation, and many of their doings are difficult to account for. The ordinary acts of woodpeckers, in exploring old trees for their daily food, are mere business transactions; but when they perch on the top of some dead, dry and sound tree, and hammer and drum upon it for a long period, I can hardly determine its object, whether for its own amusement or that of its mate's, or any other object, I know not. It may be instinctively a trial of its power and skill, both in its drumming on the dead tree and the perforations of the body of the green apple tree. It does not, however, confine its operations on the apple tree, but attacks in the same manner many trees of the forest. The bird is becoming scarce, and does but little mischief to what it did sixty years ago.

RUFUS MCINTIRE.

Parsonsfield, Maine, Nov., 1860.

COMPOSITION OF APPLES.—Every one will understand that the various sorts of apples differ much in composition, yet, in an average condition, 100 lbs. of fresh apples contain about 3.2 lbs. of fiber, 0.2 lbs. of gluten, fat and wax, 0.16

of caseine, 1.4 of albumen, 3.1 of dextrine, 8.3 of sugar, 0.3 of malic acid, 82.66 of water. Beside the above mentioned bodies, the apple contains a small quantity of tannic and gallic acid, most in the russets. To these acids apples owe their astringency of taste, and the blackening iron or steel instruments used to cut them. The percentage of ash in apple is small, yet it is rich in phosphoric and sulphuric acids, potash and soda. The dry matter of melons contains quite a large percentage of albumen, caseine, sugar and dextrine, with a small quantity of acid.

PATENT OFFICE REPORTS---1859.

AGRICULTURE.

In his introductory note to this volume, Commissioner Bishop compliments the national government on the results of its patronage of agriculture, and offers his recommendation for its future action in the following terms:

It is now about twelve years since Congress adopted the system of making annual appropriations for agricultural purposes. Previous to this time, there seemed to be but little progress made by the people in this branch of our national industry. Agricultural newspapers were then in their infancy, while agricultural societies were scarcely known or heard of. The attention paid by Congress to this subject seems to have awakened the people to its importance. It has stimulated inquiry, encouraged new experiments, and to such an extent has the public mind been excited, that agricultural societies have been formed and are now in successful operation in nearly every county and State throughout the Union. Newspapers entirely devoted to agriculture are published in nearly every State, and at prices which place them within the reach of all. Enterprising men in all the principal cities have established agricultural warehouses, where varieties of seeds, plants and cuttings, from foreign lands, as well as from different sections of our own country, can be purchased upon reasonable terms.

More recently, a national agricultural society has been established, which will undoubtedly prove valuable as a medium of communication between the various county and State societies. Indeed, so thoroughly have the public become impressed with the importance and necessity of paying more strict attention to improvements in agriculture, that it may well be doubted whether anything Congress may do can give an additional impetus to the movement.

If, therefore, it is the desire of Congress to continue the appropriation for agricultural purposes, I would recommend that it be limited solely to the collection of valuable information for the agricultural report and the collection and distribution of such varieties of foreign seeds, plants and cuttings, as have not heretofore been introduced into this country.

We believe, with the Commissioner, that the people are pretty well awakened to the importance of agriculture; but we do not agree with him in the opinion that such awakening is, in any considerable degree, the result of Congressional "appropriations" or "attentions."

In our opinion it is doing full justice to Congress to say that our government has followed, not led, in this movement. While we admit that agricultural newspapers and agricultural societies have greatly increased, we should not be willing to affirm that the first was in its infancy, or the last "scarcely known or heard of" only twelve years ago! But we do not intend at this time to discuss the subject. We are disposed to give Congress credit for all it has done, and for its good intentions for the future, which we hope will prove to be more liberal than the recommendations of the Commissioner seem to indicate. That the government which claims to have given such an "impetus" to this great leading branch of our national industry, should now limit its efforts "*solely* to the collection of valuable information for the Agricultural Report, and the collection and distribution of such varieties of foreign seeds, plants and cuttings, as have not heretofore been introduced into this country," appears to us not to be in character with the progressive spirit of the age and country in which we live. Especially would it seem that something more ought to be done, when it is remembered that our government is even now obliged to communicate with the agricultural world through a "PATENT OFFICE REPORT." The agricultural interests of this nation tucked into a corner of the Patent Office!

But we are sadly digressing. We commenced with the purpose of writing a simple "book notice" of the volume whose title heads this article.

About one-fourth of the Report for 1859 is occupied by an account of the Government Experimental and Propagating Garden at Washington; a Historical Sketch of the U. S. Agricultural Society; several articles on American Grapes and their wine-producing qualities; and a minute account of the productions of the Ionian Islands and Italy.

In the latter paper, some rather curious matters are mentioned. Sumac is cultivated near Palermo. The same soil will not bear this plant a second time, unless cropped by something else for twenty years, nor is it then so good as land on which it has never been grown. Workmen employed in a mill for grinding sumac, and who breathe an air filled with particles of its dust, are remarkably healthy, and were particularly exempt from cholera. In Sicily, good cows give only from four to six quarts of milk per day. The native sheep are small and scraggy. The ewes, which are milked regularly, give about half a pint per day. A one year old hog weighs, if fed on acorns, one hundred and twenty pounds; a two-year old, one hundred and eighty pounds. The usual rent of land for corn, &c., averages about one dollar and seventy-five cents per acre. The

orange and lemon orchards rent higher. The laborer receives about twenty cents per day. Two-thirds of the island belong to the church, and such is the policy of government that tenants take no interest in improving the land, and content themselves with a bare subsistence.

FERTILIZERS.

The Hon. Thos. G. Clemson next fills some forty pages with a dissertation on "Fertilizers." The picture which he draws of the future of our agriculture is rather gloomy.

"Farm as you may, upon the majority of soils, without the use of extraneous fertilizers, your crops will certainly diminish until total impoverishment shall leave no other alternative than starvation or emigration. . . . Exhaustion is but an affair of time; knowing the amount of nutriment in the soil, we may make an approximate calculation, and decide when, under different modes of treatment, it will work sterility."—pp. 172–3.

Of the elements of fertility he regards phosphorus the most important, the most liable to loss, and the most difficult to be procured.

"There can be no civilization without population, no population without food, and no food without phosphoric acid. Indeed it might be easily shown that the march of civilization has followed the direction of supply of that article."—p. 172.

For all the other substances essential to fertility he thinks farmers need feel comparatively little anxiety, as they abound in earth, rocks, air and water. So indeed does phosphoric acid, but not in the same profusion as the other substances, and the amount returned from the barn-yard is infinitely less than that carried away from the soil in grain, hay, milk, bone and flesh, "even on the most economically regulated farms." The loss that is constantly taking place in this most essential element of fertility and life is greatly deplored by the writer of this paper. He mentions several ways in which this loss occurs,—among others, "the burial of the dead." "By this practice," he says, "much is entirely withdrawn from circulation; for the depth at which the bodies are deposited in the ground, is below the reach of vegetation." Allowing four pounds of phosphorus to each individual, he makes some calculations of the amount of loss which occurs in this way.

By the importation of bones, the principal fertilizing element of which is phosphoric acid, and other foreign fertilizers, he thinks England has attained her present prosperous condition. This importation has increased "to an enormous extent during the last few years," yet as long ago as in 1837, no less than $1,273,000 worth of bones were imported into the United Kingdom—while the home supply was estimated at $2,500,000.

Directions are given for the preparation of bones, and farmers are earnestly cautioned against fraud in prepared manures, and advised to manufacture their own composts.

But this essay is by no means confined to a single subject. Considerable space is given to irrigation. In this connection he makes the following extract from Liebig:

There is not to be found in chemistry a more wonderful phenomenon, and which more confounds human wisdom, than is presented by the soil of a garden or field.

By the simplest experiment, any one may satisfy himself that rain-water, filtered through field or garden soil, does not dissolve out a trace of potash, ammonia, silicic or phosphoric acid. The soil does not give up to the water one particle of the food of plants which it contains. The most continuous rain cannot remove from the field, except mechanically, any of the constituent elements of its fertility. The soil not only retains firmly all the food of plants which is actually in it, but its power to preserve all that may be useful to them extends much further. If rain, or rather water, holding in solution ammonia, potash, phosphoric or silicic acids, be brought in contact with the soil, these substances disappear almost immediately from the solution. The soil withdraws them from the water. Only such substances are completely withdrawn by the soil as are indispensable articles of food for plants. All others remain wholly or in part in solution."

The action and importance of lime, marl, plaster, sulphate of barytes, magnesia, &c., &c., as well as phosphorus, are fully explained and illustrated. Drainage is left to works specially devoted to that important subject.

In relation to the state or form in which plant food is absorbed by vegetation, Dr. Clemson says: "Plants assimilate food in a state of atomic division." He thinks the received opinion that plant food must necessarily be in a soluble state for assimilation, is contradicted by facts.

"It is well known that plant vitality has the power, as it were, of corroding insoluble substances, and absorbing them by the roots. Varieties of plants growing upon rocks contain large quantities of the substance of which the rock is composed. Such is known to be the case with lichens growing on calcareous rocks. Again, the roots of the grape-vine have been found surrounding, and its rootlets insinuated in every manner through, around, and enveloping a piece of bone, which finally disappears.

CUTTING OFF COWS' TEATS.—Mr. S. E. Todd, of Lake Ridge, N. Y., has removed troublesome supernumerary teats from his cows by twisting very small wire so tightly around them as to stop all circulation. In three or four weeks the teats dropped off without producing soreness in the udder, which healed in a few days. In describing his process in the *Boston Cultivator*, he says he fastened his cows so that they could not kick, and twisted the wire with pliers.

PATENT OFFICE REPORT FOR 1859.

FEW weeks since we gave attention to some of the leading articles making up this report for the year 1859, and now continue notices of some others, which will be found interesting and profitable. We are glad to find attention turned to the subject of *Veterinary Science and Art*, a science too imperfectly understood by our people, considering the progress that has been made in other departments of our agricultural pursuits, and hope for new light that may enable us to treat the diseases of our animals in a more rational way.

VETERINARY SCIENCE AND ART.

There are three articles on the various branches of this subject, and one on the *Acclimation and Domestication of Animals*, which is said to be a proper object of veterinary science.

Dr. B. F. Craig, of Washington, the writer of two of the above articles, makes quite a different statement of the results of medicine on the human race, from that lately expressed by his brother Holmes, of this city. He quotes the Genevan statistics, extending from 1549 to 1833.

"If we take from the Geneva tables the percentage of the whole number born, who survive to different periods of adult or useful life, we will find it to have varied in different centuries, nearly as follows:

Of 100 *Persons, there lived*	*In the* 16*th century.*	*In the* 17*th.*	*In the* 18*th.*	*In the* 19*th.*
To the age of 20	39	45	56	66
To the age of 30	30	37	49	59
To the age of 40	20	30	43	52
To the age of 50	14	22	35	44
To the age of 60	9	15	26	32

By this table we see that where, in the sixteenth century, nine persons lived to their sixtieth year, thirty-two persons do so now; and if we take the average number of survivors for all periods of adult life, it will be found to be at the present time considerably more than double what it was three hundred years ago."

Having shown that medical science has done so much for the human race, the writer urges the importance of extending its benefits more generally to our domestic animals.

ENGLISH PLOWS AND PLOWING.

Our Associate, Judge French, who visited England a few years since, gives in this article his observations and impressions on this subject, including a notice of English and American steam plows. His observations were critical, and those who are curious in this matter will do well to read the whole article with care.

FARM JOURNALS.

We notice this brief article by Mr. J. L. Gow, of Washington, Pa., for the purpose of repeating one of the many advantages which he enumerates of keeping Farm Journals:

"Young men, and even children, participating in them, become more and more interested in the matters of the farm, not only learning to write, (which of itself is important,) but at the same time to express any particular subject or event in proper ideas and words, thus acquiring that happy faculty which, with many, is the labor of years —to write clearly and forcibly."

GREEN SOILING STOCK.

D. S. Curtis, Esq., of Madison, Wisconsin, furnishes an article on soiling. He says that "it can be clearly shown that the system will pay, several times over, even in the new States, where lands are cheap and plenty." That soiling or keeping cattle all summer in barns or yards, and feeding them on green food raised and cut for the purpose, might be adopted by some of the dairymen near the large cities of the olden States, we have little doubt, but we think Mr. Curtis will make slow progress in convincing the stock-growers of the South and West that the system will answer with them just yet.

SOME HINTS UPON FARM HOUSES.

An essay, with sixteen illustrations and many more capital hits, by Samuel D. Backus, New York. Our own style of building and that of our ancestors is thus contrasted:

"Indeed, it is doubtful whether, in view of the available means and opportunities of the people, the earliest houses on this continent were not better than the most recent ones. * * * The very abundance of our resources, and the freedom of our choice, instead of inciting to a wise discrimination, seem only to have developed an inconsiderate lawlessness."

He defines architecture to be "the construction of *our* buildings so as best to suit *us*, with the very best use of the means at hand," and not, as many suppose, "an inflexible set of rules, made by infallible authority."

METEOROLOGY.

Prof. Henry, of the Smithsonian Institute furnishes an article of some 64 pages on "Atmospheric Electricity." We hardly know why this paper should be headed as it is in the Patent Of-

fice Report, "Meteorology in its Connection with Agriculture," unless it is because it is published in an agricultural volume.

On the efficiency of lightning-rods, Prof. Henry says:

"In a house properly provided with lightning-rods, however many discharges may fall upon it, we are well assured from full experience and established principles, no damage can ensue to the occupants within."

The long articles on "The Construction and Arrangement of Horse Stables," and on "The Principal Plants used as Food by Man," are translations from foreign publications, which we have not space to notice. Papers on "Vegetable Fibre," and "Fish Breeding," some fifteen letters from as many United States consuls about "Tobacco," a variety of short miscellaneous articles, with a "List of Patents for Agricultural Inventions for 1859," must also be passed without notice.

For the New England Farmer.

REVIEW OF THE GROWING SEASON.

As the close of another year is approaching, it may not be unprofitable to review the progress of agricultural affairs during the season.

Spring opened early and very favorably, and farmers commenced work with an apparent determination to put in all the seed they could. The ground had been well frozen during the winter, and it was generally remarked that the land is seldom in so good condition for plowing. Even stiff clay soils turned up as fine as rich loams, and could be cultivated early.

The 4th month was dry, and an unusally large breadth of land was sown and planted. Mean temperature of the month, 42°; depth of rain 4-5 of an inch.

The 5th month was warm, and wet enough to bring vegetation forward as fast as desirable. The first week was hot, the mercury rising to 78° in the shade the 6th. Plum trees were in full bloom the 11th, pear trees the 13th, and apple trees the 22d. Mean temperature, 60.18°; depth of rain 2 9-10 inches.

The summer and autumn were wet, and the temperature was not far from an average for a term of years. We had no drought during the season; thunder showers were frequent, and considerable damage was done. The nights in the 7th month were uncommonly cool, and it was feared that corn would be injured, yet it grew well, though it is quite probable that warmer weather would have made more full-grown ears.

Some sudden changes of temperature occurred. The 12th day of the 6th month the mercury fell to 44°, and the 13th it rose to 85°, a difference of 41° in about 36 hours. The mean temperature of the month was 67.09°; depth of rain 1.88 inches.

The mean for the 7th month was 67.36°; depth of rain, 4.31 inches—nearly an inch above the average depth at the Toronto Observatory for the last 19 years.

The 8th month was warm, a portion of it hot, and generally favorable for harvesting. Grain ripened remarkably well, and proved to be but very little injured by the weevil. No appearance of rust in this section. Potatoes began to show signs of disease about the middle of the month. Mean temperature, 67.93°; depth of rain, 3.17 inches.

Light frost appeared the 2d and 3d of the 9th month, but no damage was done. The first general frost occurred the 29th, the mercury falling to 26°, and in the morning of the 30th, it fell to 27°.

A fine aurora borealis was seen on the night of the 6th. We had an unusual amount of lightning and thunder for that month. Cloudy weather and frequent rains somewhat retarded harvesting.

Corn was ripe before the frost, and the crop is good. It is the universal practice here, to cut up corn as soon as there is an appearance of hard frost, and I am rather in favor of the practice, though in my boyhood I was accustomed to "top the stalks." The fodder seemed to be more palatable to stock, than the butts from which the tops have been taken, and I believe the corn ripens equally as well.

The 10th month was a very unpleasant one; part of the time was cloudy; indeed, we had but two clear days, and rain fell in thirteen. A great deal of buckwheat was lying in the swath at the close of the month. The 29th I saw forty acres in one field, and water was standing on a part of it. Pease were not all cut, and many fields of potatoes were not dug. The mean temperature of the month was 48.78°; depth of rain, 3.90 inches, which is 3.39° in temperature, and 1.15 inches of rain, above the mean for the last 19 years at the Toronto Observatory.

The first week in the 11th month was very warm. The mercury rose to 70° the 1st, and to 69° the 2d, in the shade. Mean for the first six days, 53¾°. At this time, the 16th, the weather is fine. The temperature has not yet fallen below 26°, and though the mornings are sometimes frosty, the ground has not been frozen to any extent. Harvesting is nearly completed, though some corn and buckwheat are still out.

The season has been one of the most productive on record. Crops of all kinds are bountiful; nothing has failed, though hay was light. Fears were entertained with regard to potatoes, but the crop is not seriously damaged in this region.

Prices for all kinds of produce are good, and farmers are in high spirits. The weather is fine, this week, and plowing is the principal business.

The extremes of temperature at this place have not been as great as in some years, the minimum being 14° below zero the 5th of 1st month, and 86° the 7th of 8th month, showing a range of 100.°

L. VARNEY.

Bloomfield, C. W., 11 Mo., 1860.

INAPPROPRIATE.—A correspondent of the Ohio *Cultivator*, criticising the taste of a very rich man whose grounds were laid out in the most expensive manner, says: "A very small pond, trimmed with bright green grass to the water's edge, had more than a lumber wagon load of great conch shells scattered around its edge. The pond was pretty, and the shells, too; but the idea of those great shells washing out of that tiny pond *on the green grass*, made us all laugh."

For the New England Farmer.

FLAT ROOFS.

Sloping roofs cannot, methinks, be much, if any, more economical than horizontal ones. We adopt in building, now, very much. the French style of roof. It must cost nearly, if not quite, as much as it would to build the walls equally high around and put on a flat roof. The upper rooms of a properly constructed flat-roofed house will be more valuable and agreeable than the attics of the best French roof. The horizontal roof affords a convenient and agreeable out-of-door place for a morning promenade and airing and view. Also for an agreeable evening sitting when it is suitable weather, above the dust and annoyance of insects, and the gaze of the street. It is a sunny spot for the cultivation of plants and flowers. It is far more suitable in summer than the greenhouse for them. We are not endangered by snow slides from such roofs; they can, without danger, be cleared of snow. But a coating of snow upon the roof saves somewhat of the fuel used in the house. The wind will remove a light or dry snow and the sun will melt away snow from this roof more speedily than from the steep roof—or the double or four-sided ones. The water from this will flow gently off in every direction and will wear it less than steep roofs. Such style of houses would be pleasing to the eye with a handsome railing around its roof; supported by small iron pillars or suitable frame-work in the ceilings beneath, it will remain firm and level. With a suitable coating it will remain impervious to moisture, and can be arranged to prevent the descent of the summer's heat into the house. G. O. B.

REMARKS.—Thank you, sir. Roofs are expensive, wear away rapidly, and the best material for tnem, as well as the best mode of constructing them, are very imperfectly understood. As it would be a little inconvenient to dispense with roofs in our climate, and as most of us do not hold the key of the exchequer to reconstruct them when we please, we shall be glad if "G. O. B." will let his light illumine our pages again. The subject of farm buildings especially needs discussion.

SHADE TREES IN PASTURES.—Upon the first subject you mention, viz.: "Should shade trees be allowed in pasture fields?" there may be, perhaps, two opinions, but the one most generally held is against shade, unless it is in the immediate vicinity of water.

The most important object to be attained in grazing, next to good and plentiful grass, is that the cattle shall be free from any disturbance whatever, and that they shall take as little exercise as possible. In the first place, then, if the shade trees are at any distance from the water, the cattle will collect under them, and in hot weather will often stand there until their drinking time arrives, and then run in a body to the water, where they will push and fight for the first drink, and then run back again to the shade. I have seen them do this often. Then again, one of the greatest enemies to fat cattle is the biting-fly, which loves the shade as well as the cattle, and when the latter are huddled together under the shade, they suffer a great deal more annoyance and worrying than they do out in the open field. I have seen bullocks smart enough to leave the shade, and stand out in the sun all day, and they seemed to thrive better by it. If, however, a man has a stream running through his field, where the cattle can stand over their knees in water, let him by all means have abundant shade on the banks. His cattle can then stand, their legs protected, and whisk the water over their backs with their tails, and bid defiance to the flies.—H. W. DOWNMAN, *in American Farmer.*

For the New England Farmer.

OUR GRANDMOTHERS.

Is it possible that "Polly" can believe what she asserts in her last article, viz: "that not one-fourth of our grandmothers could read or write? That they were merely educated for work, to bake and brew, make and mend," while their mental powers were left slumbering? Why, one would judge from "Old Spinster's" and "Polly's" statements that the ladies of a half century ago were scarcely civilized. It is true that they had not the advantages for education that we have. Ten or twelve weeks of the year at school was thought sufficient. But those few weeks were so well improved that pupils often made more progress in one session, than scholars at the present time make in four. I venture to say that most ladies, fifty years ago, had a more thorough knowledge of the standard English works than young ladies of the present day, although ignorant of many of the lighter accomplishments. Pianos they could not possess, as there were none, [few—ED.] but the voice was not left uncultivated; singing schools and "Harmonic meetings" were in fashion then as now. I am satisfied, too, that they could appreciate *poetry* as well as good butter and fine linen. I well remember sitting by the side of our grandmother, whose head was white with the frost of age, but whose heart was all summer,—while she repeated page after page from Young's Night Thoughts. And there is a little treasure-box up stairs, containing time-yellowed papers, copies of poems, and letters which compare favorably with those now written. Although "Old Spinster" states that our grandmothers were "not educated to paint," &c., I think the old-fashioned paintings upon velvet which we see in so many homes, bear witness that the love of the beautiful was not entirely dormant, and that this God-given talent was not "hid in a napkin."

And not one girl in a hundred can embroider on cambric or silk as neatly and handsomely as did our grandmothers. We know that with all their "rude ignorance," they were the best of mothers. Had they been educated as mere household drudges, New England could never boast of such children as Daniel Webster, Charles Sumner, Henry Wilson, and the host of others whose names will never perish.

I cannot think that "Old Spinster" really believes that a woman who can barely read and write is fitted to faithfully perform life's duties. God would never bestow such intellectual gifts, if

they were always to be employed in baking, brewing, making and mending.

Books upon the table, pictures, flowers and music all about, and we have better wives, mothers and sisters, and consequently, better husbands, fathers and brothers. ANNA.

W———, Mass., Dec., 1860.

REMARKS.—Excellent. We believe in progress, but just as strongly believe that the present generation has no claim to *all the virtues* of the present century. There is a little frost-work, or *time*-work, about our temples, slightly indicative of a "long time ago," in which we remember women who were as much ornaments of society as any in our acquaintance now.

CARROTS.

We have frequently had occasion to define the value of carrots as food for cattle, horses, etc., and, we think, have established the fact, that one acre of carrots will more than represent, in value of product, ten acres of oats, and still the amount of progressed inorganic pabulum taken from the soil by twenty tons of roots and four tons of the leaves of carrots, is as follows:

	Pounds.
Phosphoric acid	39
Sulphuric acid	57
Lime	197
Magnesia	29
Potash	134
Soda	103
And the elements of salt	85
Total	644

When carrots are fed upon the farm, a large proportion of these inorganic constituents find their way back to the soil, and in so progressed a condition, that the amount parted with in the form of milk, animal flesh, etc., can readily be spared, for they are fully compensated for by the progressed condition of that portion returned to the soil, added to the consequent progression of the inorganic matters contained in the soil itself.

It should not be forgotten that the carrot while growing, throws off matter, which although inferior to the portion assimilated by the carrot, is superior in status to the condition at which it was received into the organism, and thus it is prepared to furnish higher results for the future.—*Ed. Working Farmer.*

CHEAP PAINT.—Noticing an inquiry for a cheap paint to put on old buildings, in answer I would say I have had some experience in that line, and will give the desired information.

In the first place, take some fine oil meal, mix it with cold water; then put it on the stove, and keep stirring till it boils. Then reduce it to the desired thickness with warm water. If you wish it white, stir in whiting, or any color you like. Apply with a brush, the same as paint. It fills the pores in the wood, so that after two coats, it will cost no more to paint an old building, than it would a new one. It penetrates the wood, and does not peel off like whitewash. It is never safe to paint over whitewash. It will last a number of years, as the oily nature of the meal keeps it from washing.—*A. B., in Country Gentleman.*

CHURNING MILK OR CREAM ALONE.

The following report of an experiment by Mr. Zoller, a dairyman of St. Lawrence county, is from the Transactions of our State Agricultural Society for 1859:

Mr. Zoller's cows are what are called native, crossed with Durhams.

We desired Mr. Zoller to make an experiment as to the two modes of making butter, so as to furnish us the result. He has done this, and the result is as follows:

Sept. 10.—Took 208 quarts of milk and strained into pans—set till the cream had thoroughly risen—skimmed and churned cold—produced 17½ lbs. of butter, ready for packing.

Sept. 11.—Took 208 quarts of milk, strained into the churns, stood till sour, but not loppered, churned and treated in the same manner; gave 19½ lbs. butter ready for packing; being a gain of ten per cent. over churning the cream.

This, Mr. Zoller believes, is about the fair difference between the two methods; and if uniformly this result is secured, it certainly is an important advantage.

It will be seen by this experiment that 10 62-77 quarts of milk produced a pound of butter, which is a much less quantity of milk than the average returns of our dairies. Mr. Zoller is of the opinion that this is about the average amount of milk required under his system, under ordinary circumstances; but the trial, during the entire season, would probably alter this average.

We think there is enough furnished by this experiment of Mr. Zoller's which has been continued for some time past, to lead others carefully to test this practice. If 10 per cent. can be secured over the ordinary method of churning the cream, and if an equally good quality of butter can be made, it will need little urging to induce our dairymen to give attention to it.

PINE-APPLE CHEESE.—Mr. Norton, of Goshen, Ct., manufactures this form of cheese quite extensively. The *Homestead* thus describes the process:

The curd of about three hundred cows is bought and daily brought to the factory to be made into pine-apple cheese. These weigh about six and one-third pounds each, and about six hundred and fifty are made every week in the best of the season. They are pressed in smooth moulds, the marks upon the surface being made by softening them in hot water, and hanging them in nets made for the purpose. Here they hang till fully cured and fit to send to market. The whole number made this year is about ten thousand. They are carefully boxed and sent to market in the neatest order, and being made hard and firm, they improve with age, enduring any climate, and are in steady demand for shipping.

PLANTS FOR FOOD.—Linnæus found by actual experiment that the horse ate 262, and rejected 212 species of plants indigenous to Sweden; cattle ate 276 species, and rejected 218: while sheep took readily 387, and refused only 141. A sheep-pasture is a desert to a botanist.

For the New England Farmer.

MAPLE SUGAR MAKING---HOW TO CONSTRUCT AN ARCH.

MR. EDITOR:—As it may possibly interest some of your readers, I will, with your permission, give a description of the sugar-arch of Mr. Wm. E. Toby, of this town.

It is built of the right length and breadth for the pans to the height of about two feet; the back end is built plain, the same as the sides, the chimney being upon the left hand front corner; then through the middle of the arch lengthwise is laid a tier of brick as high as the sides, and extending from the front end to within one foot and a half of the back end, the left hand half of the front end being bricked up. In the half of the arch next the chimney, stones are laid so as to throw the blaze against the bottom of the pans as much as possible.

Now I think every one must see wherein lies the peculiar excellence of this arch. It is the saving of wood, which is getting to be a very desirable object in most sections. It takes less wood to boil the same amount of sap, because the heat, instead of going directly into the chimney and perhaps blazing from the top, as I have seen it in chimneys of good height, is obliged to travel back under the pan, consequently but little of it gets into the chimney.

It would perhaps be well to place the division wall nearer the side upon which the chimney is, so as to allow the introduction of larger wood. I recollect seeing in the *Farmer*, some two or three years ago, some hints on sugar-making, and among other things the writer advised the use of the old-fashioned tubs, larger at the bottom, upon the plea that they excluded many leaves, pieces of bark, &c., from the sap. Now as you value your future happiness, do not follow the suggestion. I will admit that they exclude a few (and only a few) leaves, but what unhandy things to have around, when you come to stow them away; if you have a large sugar-place, you must necessarily do as the boy said his folks did with their hay, "stack what you can out-doors, and put the rest in the barn."

One thing more. If you can conveniently have your sap-holder higher than the top of the arch, buy a few feet of gas pipe, pass it through the chimney, making a coil or two inside; connect one end of it with the holder, which can be done with lead pipe, bring the other end of it over the pan and put a stop-cock upon it to regulate the flow of sap. Then the sap comes into the pan already warmed, and does not check the boiling as when a bucket full of cold sap is poured in.

Finally, build your arch after the above plan, have good wood, and my word for it, you will see the sugar "coming into a charming brownness," and not so very brown either, if you will only strain your sap and keep all milk, eggs, saleratus, &c., out of it. JAMES TOBY.

Calais, Vt., Nov. 26, 1860.

DEER FOREST.—The largest modern deer forest is that of the Duke of Athol, which, according to his evidence in the late case of the Earl of Wemyss against Campbell of Monzie, extends to 400,000 acres. The next is the forest of Farquhason of Invercauld, but which is partly under sheep and partly under deer, altogether about 130,000 Scotch acres. Next to which ranks Lord Fife's forest, of Mar, about 60,000 acres. There are a number of other deer forests of much smaller extent, but the extent is not much increased of late years; and by comparison it will be found that the extent of ground under deer is now much less than it was a hundred years ago.—*Perthshire Courier.*

For the New England Farmer.

THE LONG ISLAND LANDS.

WHAT JOHN JOHNSTON THINKS OF THEM.

LETTER FROM JUDGE FRENCH.

MR. BROWN:—I published my own opinion, to some extent, of the Long Island lands, last spring. That there should be a wilderness of vast extent, with a railroad through the heart of it, within two hours' ride of the city of New York, the best market in all the North, is a fact so strange that many conclude from it at once, that the land is worthless. With a climate far milder than New England, and from its island position, not subject to our severe droughts, the soil must be poor indeed, it would seem, to keep the land in want of purchasers at $20 per acre. Those lands are covered with a low growth of scrub-oaks which renders the first breaking up difficult, and the first impression forbidding; but there are no stones, and no large stumps and no abrupt hills, and there is very little broken land. After the first plowing, a span of horses may do any work upon these lands that is required.

There is no great obstacle in the way of breaking up, but the question is, is the land valuable when it is cleared? I have not my former letters at hand, but I recollect well my impression as I passed over these lands, whether I have expressed it before or not, that they are eminently adapted to sheep husbandry.

The skinning process cannot last long on any land however fertile, and although it is very convenient for a few market gardeners to bring out stable manure from New York fifty miles on the railroad, yet the rank and file of the farmers must consume their hay at home, and make their manure there. In the four-course system of English husbandry—where turnips, barley, "seeds" or grass and wheat constitute the rotation, two crops, the turnips and "seeds," are consumed mostly by sheep on the farm, and two are sold. This precise rotation may not suit Loug Island, but the principle of *home consumption of half the produce* suits all soils and climates.

John Johnston, of Geneva, New York, is, I think, a Scotchman, by birth, and the man who has done as much as any man alive in this country for practical agriculture.

He is the leader in drainage, and especially

tile drainage, in the United States, a plain honest farmer, who has grown rich by his farming.

His opinions are as valuable as those of any man within my knowledge, upon this very subject, and here is what he says, through the *Country Gentleman*, of the Long Island lands. I omit the part of his letter, which does not refer to the middle portions of the island:

"I took the cars at Hicksville to view the so-called barrens of Long Island, near Islip—especially that described and advertised by Dr. Peck. I stopped at Thompson Station, and called on Mr. Stone. He has a good house and barn, has cleared off considerable of the scrub oaks with which some half million acres are covered, and has some fifteen acres sown with winter rye. He has purchased some two hundred acres, and on terms of purchasing about four hundred more. He also took me to Mr. Taylor's and a Mr. Bridge's, who have also made settlements near him, and to a farm purchased by Dr. Stimson, of Canada West. His two sons are going ahead finely, clearing off the scrub oaks and rooting them out; they have a good deal of winter grain sown, and looking finely.

I noticed where they were digging cellars and wells, the soil was from two to three or four feet deep, and was gravel underneath—some of it quite solid, yet the soil seemed perfectly dry, and I can see no reason why it will not produce as well as any part of this highly-favored island. I had holes dug in many places, and found the soil nearly the same depth. I never saw finer apples than some grown there. I saw a peach orchard of some six years' growth, from which was sold $400 worth of peaches this season. It is strange that this vast quantity of land laying adjoining settlements for two hundred years, should have laid until now in an unproductive state. I think it requires only labor to make it valuable land. A Mr. Wilson has a very fine farm on the same wilderness; he has one hundred acres improved and as fine-looking land as I ever saw, and I was told raises good crops. I could see from the looks of his clover and grass fields that his crops of clover and grass had been excellent, and I always think land that will produce good timothy and clover, must be good land. I was told that Mr. Wilson raised 3000 bushels of potatoes on these lands, from ten acres of land last year. The quality of the potatoes raised on these lands is excellent, so far as I saw. I also saw some very large onions raised from the seed, and some pretty good corn and turnips.

Now, Thompson is only two hours by rail to the city. It is strange that so much land remains in a state of nature so near that city that consumes so much of the products of the soil. I heard various reports about the cost of clearing the land—some said about $13 per acre; others said to do it thoroughly would cost from $20 to $25. In a few years it will show what the land will do; these gentlemen have gone at it with energy, and I hope they will be abundantly paid for their enterprise. To look over the country on that wilderness, one thinks it a vast plain, but where cleared it is just rolling enough, and where I travelled through it, it appeared the same. If some thousands of Germans were settled there, I think they would have gardens equal to any on the island. As I said before, the island has been settled over two hundred years; the lands, or a greater part of them have remained in the hands of the descendants of those families until this day, and excepting for their fast horses, the greater part of the farmers appear to be at least half a century behind the age. Talk to a Long Islander about the wilderness, and he will tell you it is not worth a dollar the whole of it; but I believe he does it through prejudice or ignorance, and I fully believe the time is close at hand that will make them change their opinion.

Mr. Wilson's farm may be some eight or ten miles from Thompson's Station, but also adjoining the railroad. He is said to be a man of wealth, and truly he appears to have a fine place and fine farm, and I was told he would have six hundred acres under cultivation in a few years. Thompson's Station is only four or five miles from the village of Islip—a great resort for the grandees of New York city in the hot season; it is also a port for shipping, and quite a handsome place, with very large hotels. The land around Islip, I was told, sells from $200 to $300 per acre, and three or four miles distance in the wilderness it sells at $20, and I would not be surprised if the latter proved the best land by far, after it is cultivated a few years. The land around Paris, Canada West, I have been told by men who cleared it up, was all covered with scrub oak, and indeed the soil is very similar to the Long Island wild lands; and now there is no part of Canada where farming is more profitable than there; their barley excels, their wheat is also of a fine quality and early, turnips grow luxuriantly, as well as other root crops; and I see nothing to hinder the Long Island barrens from producing equally as well, if they were settled with as intelligent and enterprising farmers."

Of the island generally Mr. Johnston says:

"It is surely a fine country to keep stock, and a good market for fat stock quite near them. I did not see twenty sheep on the island, and there can be no better land to keep sheep, as it is all dry and raises the best of timothy and clover, where the land is kept in good condition. I would advise them to kill off their dogs and keep sheep. It will ultimately pay them far better than either carting or carrying their hay, straw and corn to the city. True, the city must have hay and straw, but as far as Long Island is concerned, they ought either to have double the price they get now, in order to enable them to purchase far more manure, or else consume it on their farms.

The land is of excellent quality, and mostly of easy culture, and if properly managed would be the garden of the State. The climate is much better than where I write; their spring comes two weeks at least earlier, and the fall frosts are as much or more longer in coming, and I do think it is an excellent country to farm in. I was told there were some men keeping dairies and doing very well; improving the soil and making it rich. Some are doing the same by gardening on a large scale, and many are doing well at the latter on a small scale; but how the farmer that sells all, or nearly all, his hay, straw and corn, can do well, I cannot comprehend."

I did not observe on the island any unsuccessful experiment in farming, by anybody who deserved success. I did see a single cow drawing a plow in a miserable garden, and a single steer harnessed to a wagon drawing a ragged-looking driver, and poverty following close upon intemperance; and as cause and effect seemed to maintain their usual relations, I expect when energy and industry, supported by the requisite skill, shall enter upon Long Island barrens, to see fruitfulness and prosperity attend their labors.

EXTRACTS AND REPLIES.

PORTABLE GRIST MILLS.

I want to get some *reliable* information in regard to the "portable" grist mill which I saw advertised in your paper. I want to know whether it may be driven by one of A. W. Grey's single horse power? These Powers are being manufactured in this town, and sold to the farmers round the country to thresh grain and saw wood with a burr saw, and drag or cutting-off saw, and are one of the greatest labor-saving machines we have among our farmers. I have from three to five hundred bushels of grain to grind, every year, and I have to haul it some two miles to get it ground, and frequently have to go the second time after it, which is no small job in the spring, when the roads are muddy. How fast can they grind, and are they durable, &c., &c.? What do they cost?

If you can give the desired information in your weekly *Farmer*, I have no doubt but there are others in want of some information upon the above subject, who would be much obliged for the same.

I have been driving one of Hickock's Portable or Hand Cider mills this fall, with my horse power, and I am very much pleased with the operation. I can grind with ease two bushels per minute, and the horse hardly knows he has done any thing. If I can get a grist mill that will do as well, I should be very glad.

S. W. SOUTHWORTH.

Middletown, Vt., 1860.

REMARKS.—We cannot give the information desired above, and shall be glad to have some person in possession of the facts supply it. The matter is an important one.

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MIXING AND APPLYING PAINTS.

Can you inform me if there is any work which gives full directions for mixing and applying paint, especially for graining? I would like one which treats the whole subject in a thorough manner. If there are several books of the kind, please state their comparative merits, with the *price* of each. WM. F. BASSETT.

Ashfield, Dec., 1860.

REMARKS.—The only work we can recall upon the subject is *"The Painter's and Varnisher's Guide,"* which is sold by A. Williams & Co., Boston, for about 75 cents.

WHEAT AND OATS IN READING, VT.

I sowed one bushel of tea wheat on 120 rods of land, April 27, without manure the present year; planted with corn and potatoes and manured highly last year. Cradled Aug. 20, in a very dry time. Threshed with a machine, Nov. 8, and got a yield of 21½ bushels of very nice wheat.

I also sowed 5 pecks of oats on ⅞ of an acre of land, manured highly last year, mowed them Aug. 21, rather green, threshed at the same time of wheat, 69 bushels of heavy oats. G.

Reading, Vt., Nov. 28, 1860.

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TAN BARK—SODA ASH—LEACHED LIME.

Is tan good for composting? Will it be profitable to buy it?

Is soda ash and leached lime, such as is always found at the soap shops, good for manure, or for composting? Will it pay to buy it?

GEORGE E. MITCHELL.

Somerville, Nov., 1860.

REMARKS.—Tan bark would scarcely pay for hauling far. If nothing were paid for it, it would be economy to haul two or three miles when dry and light, and when other work would not press.

For remarks upon soda ash, see weekly *Farmer* for Oct. 27, and Monthly *Farmer* for Dec., page 548.

For the New England Farmer.

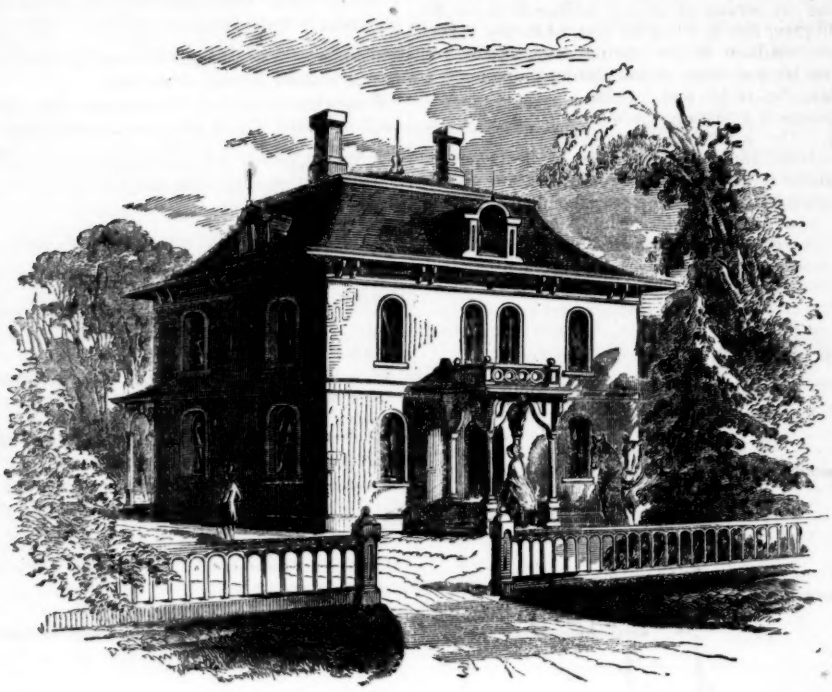
A NEW INSECT---PSOCUS VENOSUS.

MR. EDITOR:—The insect so accurately described by "S. A. N." in your last, belongs to the *Psocidæ*, a small family of the order *Neuroptera*, consisting almost entirely of species that are beneficial or at least not injurious, to living vegetable substances. The description, which applies to the most common species in this part of the country, is that of the *Psocus venosus*, or the "veined Psocus" of Burmeister, so called from the prominent veins of its fore-wings. It occurs generally in large numbers on the trunks of various trees, old palings and mossy stones, and is supposed to feed upon the minute insects and animalcules, or the decaying vegetable matter which is found there. P. R. UHLER, Esq., of Baltimore, informs me that they are very numerous on the orange trees in Florida. Very little is distinctly known of their habits, and any information on that point will be acceptable.

FRANCIS G. SANBORN.

Andover, Nov. 28, 1860.

THE SECKEL.—This pear often succeeds poorly as a dwarf. The editor of the *Country Gentleman* has a dwarf Seckel that has done finely this year on his grounds, a strong clay loam. It has borne a full crop, most of the specimens of which have averaged in measurement *three inches long, and two and a half in diameter.* They would not be recognized as Seckels, being as large as medium sized Flemish Beauties; while in flavor they were equal to the Seckel grown on standards, with less of the musky perfume.



DESIGN FOR A SUBURBAN RESIDENCE.

BY GEORGE E. HARNEY, LYNN, MASS.

We present in the present number of the *Farmer*, the first of a series of twelve designs, now in preparation, one of which we propose to publish each month, during the coming year.

The design here given is of higher cost than those which will follow; as we intend the series to include only such plans as can be adopted by persons of moderate means. We have also another object in view, in the presentation of such designs. The tendency to extravagant expenditure is one which has rapidly increased in our suburban towns, and if not checked in some way, will lead in individual cases to deplorable results. We hope to show that for a moderate expense country and village residences can be erected, which will combine all the excellences of good taste, and harmony with the natural surroundings, to as great a degree, at least, as those structures which are covered without and within, with a profusion of elaborate and costly ornamentation.

The taste which Mr. Harney has displayed in the designs we have already given from his pencil, gives us confidence to believe that the design of the present series will be of great value, and we commend him to those of our readers who may chance to need his professional services. We now leave him to speak for himself.

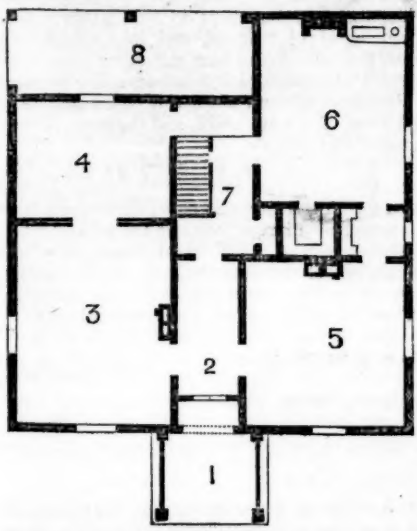
We have the pleasure of making our bow once more to the many readers of the *Farmer*, and of reopening our budget of designs for country buildings. We promise to make a monthly visit during this year, and to show as well as is in our power some of the varieties of which rural architecture is capable.

We have no idea of giving model designs, for they are oftener talked about than seen; what would be a model design for one family being ill arranged, and wholly unsuited for another; the nearest we can do will be to consult all tastes as well as we may be able, offering a few suggestions, and giving as great a variety of designs as possible; consulting, especially, the wants of people of moderate income; by this means we hope to be of some service to those about building for themselves farm-houses, or cottages, or barns, and to those about altering or repairing their old ones.

We shall commence with the village—the first design being particularly adapted for a suburban or village residence, and as such, is necessarily somewhat of a show house; hence we have provided a large parlor, dining-room and library, the kitchen being in the rear, and somewhat smaller, though provided with ample closet room.

The plan is nearly square, measuring 30 by 36

feet. The front door is recessed three feet, and opens into a vestibule, No. 2, six feet wide. On the left is the parlor, No. 3, 14 feet by 20, connecting by means of glazed folding-doors with the library, No. 4, 10 by 14 feet. On the right of the vestibule is the dining-room, No. 5, 14 feet by 16, and back of the dining-room is the kitchen, No. 6, 13 feet by 16. Between these two rooms is a passage containing cupboards for china. The kitchen is furnished with a large store-closet, and a sink, and pump. In order to economise room, we have provided but one staircase, and have placed it in a convenient but retired position in the rear hall, No. 7, separated from the vestibule by a glazed door. For sleeping accommodation we have provided four chambers, with closets, and a bathing-room on the second floor, and three chambers, and a clothing-room in the attics, making in all seven chambers; a large number for a house of this size.



Construction and Cost.—Built of wood, and covered with clapboards or sheathing, (either method being more appropriate for a dwelling of this style than the vertical boarding,) the roof covered with slate, and the interior plainly finished, this house would cost from 3800 dollars to 4000. The first story is ten feet high, and the second nine and a half.

WINTER MULCHING.—Our New England winters are trying to many of our plants, shrubs, and even trees, and some of them that are highly valued are annually lost, either by the intensity of the cold, or by the alternation of cold and heat. Bulbs, flowering shrubs, and even young trees, such as apple, pear, peach and apricot, are killed, after being tended with care for several years. This may be prevented, in many instances, by throwing around the base of the tree, and extending some two or three feet from it, any coarse litter, such as leaves, straw, fine chips from the door-yard, or even fine brush, such as birch, alder, or what is better, pine, hemlock or spruce branches. Nothing, however, is so good as the cleanings of the horse stable where the animals are bedded with straw. This becomes saturated with their droppings, its fibre being crushed with their feet so as to fit it for a good absorbent.

When this is applied, the double purpose is served of protecting the plants and of fertilizing them by the matter which is washed out during the winter and spring rains. After the frost leaves the ground, the coarse remainder may be spaded in with the most decided advantage.

VENTILATION OF BARNS AND STABLES IN WINTER.

At this season the ventilation of stables should be well attended to, for on the approach of winter we naturally shut the doors and windows of stables, and should at the same time make provision for a fair amount of ventilation. Those who cannot be induced from kindness to the animal, to make the necessary arrangements for ventilation, should at least do so as a matter of self-interest. Every animal breathes atmosphere for the purpose of abstracting oxygen from it, and when instead of this, large amounts of sulphuretted hydrogen are present, arising from decomposition of feces, gaseous exudations from the surfaces of other bodies, etc., the ox cannot maintain his existence, except by the use of a greater amount of food. He will not increase in size while breathing an impure atmosphere, while the digestion of larger amounts of food by unnatural and forced processes, vitiates the quality of the atmosphere to be breathed, to a still greater extent. With milch cows the milk is lessened in quantity, and materially deteriorated in quality. With horses the want of ventilation produces lassitude and inferior muscular development; this is particularly true of young horses; indeed, the general effects on animals are such as are suffered by the inmates of badly ventilated alms-houses, prisons, etc. In making the necessary arrangements for ventilation, great attention should be paid not to create strong drafts of air, so as to reduce the temperature. A tube brought down from above the ceiling, communicating with the outside atmosphere, will permit pure air to pass into the building, while an opening at the level of the ceiling, and another slightly lower than the heads of the animals, will permit the heated gases to rise, as well as the gases exuded from the animals, etc., to pass out, being replaced from the first named source. Such openings, if of proper size, will not materially cool the stable. It must be remembered that when stables are at too low a temperature, a larger amount of food is required to furnish the necessary animal heat. Stables should be supplied with disinfecting agents underlaying the bedding, for the purpose of absorbing such gases as will come in contact with them. Charcoal dust, and many other substances which we have before enumerated, will answer this purpose. Slight dustings of Plaster of Paris are also useful, and these should find their way to the compost heap in time, and in the very best condition as food for plants.—*Working Farmer.*

For the New England Farmer.

SOME REMARKABLE FACTS IN RELATION TO CLIMATE.

COMPILED FROM MEYEN FOR THE N. E. FARMER.

Alexander Humboldt connected those places which possess an equal degree of heat, by lines which he called *Isothermal*, from the Greek words, *isos*, (equal,) and *therme*, (heat)—that is, lines of equal heat. As the mean temperature of different places are exceedingly various, there must also be various isothermal lines, which are always designated by the mean temperature of the place. Observations have shown that these isothermal lines by no means run parallel to the parallels of latitude, but incline towards them, particularly in the higher latitudes, but less near the equator, where they pretty nearly coincide with the parallels of latitude.

In the northern hemisphere of the globe, all the eastern coasts of continents and isolated masses of land are colder than the western coasts of the same latitude. Thousands of observations have confirmed this phenomenon, although its explanation is not yet quite found out, and, therefore, the isothermal lines frequently rise and fall. For example, Ireland, England and Belgium are countries which have the same isothermal line; but on the eastern coast of Asia, it passes just above Pekin, which is in the same latitude as Naples. Canada is further south than Paris, and it has the temperature of Drontheim. The trees which grow in New York—the latitude of Naples—flower at the same time as they do at Upsal.

The isothermal lines do not run in straight lines, but in curves. The isothermal lines rise in their course, from the eastern coast of America towards Western Europe, but they sink again towards the south in the interior of the continent, and that so quickly, that Scotland lies in the same isothermal line as Poland, and England as Hungary. We find, however, that it is only near the coast that they sink so rapidly, and that it is in consequence of the great difference which was previously shown to exist between coast and continental climates of the same latitudes, it is probable that it does not take place in the interior of large continents, but that there the isothermal lines run in a straight direction.

In the interior of the New, as well as of the Old World, the isothermal lines incline towards the south. Thus if we go towards the pole in the interior of the two great continents, we find that the temperature decreases much more rapidly than in the interjacent seas. It is well known that for many years, attempts have been made to penetrate the frozen Arctic seas. By Behring's straits, where the voyager is constantly near the great continent, he has penetrated only a little further than 70° north latitude; by sailing along the American coast through Baffin's Bay, he has reached the 77th degree north latitude; while in the open sea, in the meridians of Norway and Sweden, it is easy to sail to Spitzbergen, which lies above 81° north latitude. *We thus learn that the pole is not the coldest point of the earth, but that there are two poles of cold, one in the interior of each continent.*

But we have all seen that the mean temperature of the whole year has not so great an influence on the vegetation as the mean temperature of the different seasons, and therefore, it is still more important to know the places which, though in different latitudes, possess the same summer or winter temperature. Baron Humboldt was the first also who paid attention to this principle. He named the lines which connect places of the same mean winter temperature, *isochimenal* lines, (from *ochiemon*, cold,) and those which connect places of the same mean summer temperature, *isotheral* lines, (from *theros*, summer.)

The isochimenal lines in the interior of continents bend considerably towards the south, which is principally obvious near the Atlantic, where the curves, when they come near the coast, make a sudden turn towards the north. This shows the greater coldness of the winter in the interior, compared with the coast of the same degree of latitude.

The course of the isotheral lines that bend towards the north is directly opposite that of the isochimenal, for the summers on the coast are colder than the summers in the interior of the same degree of latitude, and in a great many cases, they are colder near the coast than in the interior, in a much higher latitude. The summers of Paris and Moscow are nearly equal, though the winters of Paris are mild, and those of Moscow almost insupportable.

Differences in the mean temperature of the eastern and western coasts have already been alluded to. There are also equal differences in the summers and winters. While the inhabitants of Quebec in winter complain of the piercing cold, the natives of the same latitude on the western coast of America go with scarcely any clothing.

The importance of the difference between the climates of the east and west coasts of North America to the distribution of vegetation was early observed. Burton has remarked that the plants of North America grow on the west coasts in higher latitudes than on the east, and the eastern coasts of Hudson's Bay are desert and herbless, while on the western coasts there is a tolerably rich vegetation.

The difference between the climates of the east and west coasts of continents and islands has also been observed in the southern hemisphere—but here the principle is reversed—for the west coasts are colder than the east, while in the northern hemisphere the east coasts are the colder. South America shows very decidedly this arrangement of a warm eastern coast, and a cold western coast. Various attempts have been made to explain the proportionably very cold climate of the western coasts of South America, and many causes have been assigned which would indeed diminish the heat there. The chief cause is evidently the same which operates in the opposite manner in the northern hemisphere.

The successful cultivation of certain plants does not depend so much on the mean annual temperature as on the temperature of summer. Thus, Indian corn cannot be raised in Great Britain, though it possesses a higher mean temperature than New England, but the hotter summers of New England are more favorable to it than the longer and colder summers of England. The same remark is true of annuals as a general rule, they are governed by isotheral lines, flourishing equally well in different latitudes, if they have equally hot summers. Thus the Californian annuals suc-

ceed well in New England, but not in Great Britain. The distribution of perennials, on the contrary, is regulated by isothermal lines—that is, by the mean temperature of the year. Lapland and St. Bernard have the same mean annual temperature, but the monks of St. Bernard envy the Laplanders their fine climate, because their summer is warmer. There are perennials at St. Bernard, which the winters of Lapland would kill, but the products of the gardens in Lapland are superior to those of St. Bernard.

"I SHALL KNOW HER AGAIN."

BY B. F. TAYLOR.

O, have you not seen, on some morning in June,
When the flowers were in tears, and the forests in tune,
When the billows of dawn broke bright on the air,
On the breast of the brightest some star clinging there?
Some sentinel star, not yet ready to set—
Forgetting to wane, and watching there yet?
How you gazed on that vision of beauty awhile;
How it wavered till won by the light of God's smile;
How it passed through the portals of pearl like a bride
How it paled as it passed, and the morning star died'
The sky was all blushes, the earth was all bliss,
And the prayer of your heart, "be my ending like this

So my beautiful May passed away from life's even;
So the blush of her being was blended with heaven;
So the bird of my bosom fluttered up to the dawn—
A window was open—my darling was gone!
A truant from tears, from sorrow and sin—
For the angel on watch took the wanderer in!
But when I shall hear the new song that she sings,
I shall know her again, notwithstanding her wings,
By those eyes full of heaven, by the light on her hair,
And the smile she wore here she will surely wear there!

POSTS---TIME FOR CUTTING TIMBER.

MR. BROWN:—You gave a method for preserving posts, some time ago, which I unfortunately have lost. May I ask a repetition of it? Is it expensive?

Which will last the longer in the ground, oak, or chestnut? Does it make any difference which end is set in the ground? What is the best time for cutting? J.

South Hadley, Nov., 1860.

REMARKS.—"One pound of blue vitriol (sulphuric acid and copper) to twenty quarts of water. Dissolve the vitriol with boiling water, and then add the remainder. The end of the stick is then dipped into the solution, and left to stand four or five days; for shingles three or four days will answer, and for posts six inches square, ten days. Care is to be taken that the saturation takes place in a metal vessel or keyed box, for the reason that any barrel will be shrunk by the operation so as to leak. Instead of expanding an old cask, as other liquids do, this shrinks them."

This preparation is not an expensive one.

We do not know whether chestnut or oak would be the most durable. Some one who has had experience will be kind enough to reply.

It is a pretty generally received *theory* that inverted posts will last longer than those not inverted—but this theory is controverted with some force.

September is thought by many to be a good time to cut posts, or any wood to be used as timber. Mr. E. J. YOUNG sent a communication to the *Ohio Farmer* in 1853, in which he says *June* or *July* is the proper time. He adds, that "the time settled by tradition appears to be the month of *February*. Perhaps the reason is, the winter is the most convenient season for doing such work, there being more leisure time then than in summer; and because it has generally been done at that time, it is supposed to be the right one. But if any one will be at the trouble of cutting a tree in the winter or spring, and one in June or July, and making them into rails, and then see which will last longest, he will not need any other argument to convince him that tradition is at fault in this case at least."

We believe in Mr. YOUNG'S views on this matter; they are consistent with the nature of trees. The rule should be to cut a tree as little as possible for any purpose when it is full of sap in activity. By the latter part of June, the principal portion of the sap has left the trunk of the tree, and gone to its extremities, where it has been elaborated by the leaves into suitable food for bud, twig, and a new layer of wood to increase the diameter of the trunk. The heart of the tree contains then little or no sap, and the circles that surround it, called sap wood, have but a small quantity compared with what they held in April or May. At this period, like some other operations in nature, the bark yields to the downward pressure of the elaborated sap, and makes room for its deposition. In some cases, where the soil is rich, and the growth of the tree luxuriant, the bark will split through the entire length of a young apple tree, and with a width of a fourth of an inch; and, although the season then has passed, in which trees are usually peeled, there will be no difficulty in removing the bark from large trees, when the timber will be found seasoning rapidly, and becomes exceedingly compact and hard.

Timber prepared in this manner, we are inclined to believe, will last much longer than that cut at any other season of the year.

An excellent article on this subject was prepared by the editor of the *Country Gentleman* in 1854. In answer to the question, "What time shall timber be cut?" it replies, "*Never in winter*, but always in summer. It should be cut during the most rapid season of growth, and while that season is drawing to a close."

"Experienced tree-propagators have found that much earlier than this, the juices of the tree are in too thin or liquid a state to form a good adhesion between the bud and the peeled surface. From the moment that the bark separates freely

from the wood, these juices continue to thicken, until growth ceases altogether, and the new wood is completely formed; and when this new wood is in the state of a thick paste or cement, then is the time that the bud will adhere most perfectly. This is the period when the bark may be peeled from a tree without destroying its vitality. And this is the time for cutting timber. Early in spring, the tree is full of sap, which is little else than pure water, and which has been gradually accumulating through winter by the absorption of the roots, with no outlet for its escape, as there is in summer through myriads of leaves. While the tree is thus replete with water, it is in the worst condition to be cut. But towards mid-summer, when a portion of this water has passed off through the leaves, and the rest has been much thickened by conversion into material for wood, the case is very different; for while the watery sap promotes only decay, the thickened juices soon dry and harden, and assist in the preservation of the wood."

The editor states that his opinions are corroborated by those of Mr. ISAAC HATHAWAY, of Farmington, Ontario county, N. Y., a man of great experience in the preparation and use of timber. His opinion is, that timber cut at the proper time in summer will last *three* times as long as when felled in winter!

Hickory contains a sweet sap, sweeter, perhaps, than that of the maple; insects instinctively turn to it as a suitable place to deposit their eggs and for hatching their young, and we have seen axe helves and large quantities of the finest-looking ox-bows rejected, in consequence of being perforated by worms. The term applied to such timber is *powder-post*. When in this condition, it becomes utterly valueless for any purposes where strength is required. Persons who deal in such timber are obliged to keep it in cellars or damp rooms, and darkened, so as to prevent the entrance of the insect that deposits the egg pregnant with so much mischief.

If this timber were cut in June, peeled at once and properly housed, it would probably become so hard before the appearance of the insect in the following spring, as to resist all their efforts to deposit their eggs in it. The question of our correspondent—"What is the best time to cut timber?" is an important one; the true time ought to be ascertained, beyond all doubt, and then made public.

NATURE FROM THE WATER.—A person should go out upon the water on a fine day to a short distance from a beautiful coast, if he would see nature really smile. Never does she look so joyous as when the waves are rippling gently, and the scene receives life and animation here and there from the glancing transit of a row-boat, and the quieter motion of a few small vessels. But the land must be well in sight; not only for its sake, but because the vastness and awfulness of a mere sea-view would ill sort with the other parts of the gay and glittering prospect.—*Guesses at Truth.*

HOW A FLY HOLDS ON.

I have here inclosed a small window fly in the live box of a microscope, that you may examine the structure of its feet as it presses them against the glass cover; and thus not only get a glimpse of an exquisitely formed structure, but acquire some correct ideas on the question of how a fly is able to defy all the laws of physics, and to walk jauntily about on the under surface of polished bodies, such as glass, without falling, or apparently the fear of falling. And a personal examination is the more desirable because of the hasty and erroneous notions that have been promulgated on the matter, and that are constantly disseminated by a herd of popular compilers, who profess to teach science by gathering up and retailing the opinions of others, often without the slightest knowledge whether what they are reporting is true or false.

The customary explanation has been that given by Derham in his "Physico-theology," that divers flies, and other insects, besides their sharp, hooked nails, have also skinny palms to their feet, to enable them to stick to glass, and other smooth bodies by means of the pressure of the atmosphere, after the manner as I have seen boys carry heavy stones with only a wet piece of leather slapped on top of a stone." Bingley, citing this opinion, adds that they are able easily to overcome the pressure of air "in warm weather, when they are brisk and alert; but toward the end of the year this resistance becomes too mighty for their diminished strength; and we see flies laboring along, and lugging their feet on windows as if they stuck fast to the glass; and it is with the utmost difficulty they can draw one foot after another, and disengage their hollow cups from the slippery surface."

But long ago another solution was proposed, for Hooke, one of the earliest microscopic observers, described the two palms, pattens, or soles, (as he calls the *pulvilla*,) as "beset underneath with small bristles or tenters, like the wire teeth of a card for working wool, which, having a contrary direction to the claws, and both pulling different ways, if there be any irregularity or yielding in the surface of a body, enable the fly to suspend itself very firmly." He supposed that the most perfectly polished glass presented such irregularities, and that it was moreover always covered with a "smoky tarnish," into which the hairs of the foot penetrated.

The "smoky tarnish" is altogether gratuitous; and Mr. Blackwell has exploded the idea of atmospheric pressure; for he found that flies could walk up the interior of an exhausted air-pump. He had explained their ability to climb up vertical polished bodies by the mechanical action of the minute hairs of the interior surface of the palms; but further experiments having showed him that flies cannot walk up glass which is made moist by breathing on it, or which is thinly coated with oil or flour, he was led to the conclusion

that these hairs are, in fact, tubular, and excrete a viscid fluid, by means of which they adhere to dry polished surfaces; and on close inspection with an adequate magnifying power, he was always able to discover traces of this adhesive material on the track on glass both of flies, and various other insects furnished with *pulvilla*, and of those spiders which possess a similar faculty. —*Gosse's Evenings at the Microscope.*

For the New England Farmer.

POTATO BLIGHT AND ROT IS CAUSED BY INSECTS.

MR. EDITOR:—In your paper of Nov. 24th appears from Mr. Goldsbury, of Warwick, another attempt to make your readers believe his "seven reasons" settle the question that insects cannot cause the potato blight and rot. He also wishes them to believe that his "logical reasons" of March 3d have become, (Nov. 24th,) real "facts"—"reasons logical, "alias "facts." He says my last communication furnishes "no new facts." But that I "persist in asserting and reasserting the old ones." I shall hold fast to my facts, my ocular demonstration. They are more reliable than "logical reasons."

And furthermore, I am taunted with being "first in my own cause," that is, for having disclosed to the public the result of my microscopic researches. And, because *new to him*, they amount to nothing—they are a "deception." Who shall divulge and make known the result of research and the development of *new discoveries*, but the explorer or discoverer himself? Did Columbus keep silent? Were Arkwright, Fulton and Whitney dumb? Did these men make no explanations? Was Franklin's tongue and pen bottled and sealed? Have not Reaumur, Kirby and Spence and Dr. Harris written out their entomological researches? Must I keep silent after making new discoveries, entomological and embryological, *undescribed by them?* And must I be told by Mr. Goldsbury, *ignorant* (admitted by his own confession,) of the use of "microscopic glasses," that he as "A neighbor cometh to search me?"

His *perfect ignorance* of microscopy and what it clearly reveals of God's mysterious works, disqualifies him, (now, at least,) to unfold and describe the secrets of His power, embryologically viewed, and pass judgment upon my new discoveries. Must scientific research be measured and considered ended, when the tomb closed over the remains of Reaumur, Harris and others? Can no one else make entomological researches and developments, and describe what the microscope reveals? Let Mr. Goldsbury take the beam from his own eye before he attempts to "search" and judge others.

Mr. Goldsbury's memory appears very poor. He forgets that March 3 he said that "Insects do not cause the rot for the following reasons." Seven reasons are written out, and he follows by saying these are my "reasons for disbelief." November 24th he denies what he then said, and declares they "are not reasons or logic" but "facts." And he changes the name of "reasons" by an *alias* to the name of "facts." In another instance his memory fails him, or he "argues in a circle." See what he says in your paper, March 3d: "It is believed the cause of the rot is unknown." Again in the same communication he says: "I repeat therefore that the cause still remains unknown." See what he says in a letter to me, March 16th: "It was not my *object* to assert in the *N. E. Farmer* that the cause of rot was unknown." He did "assert" it, and what was his "object" of "repeating" it, and then denying it, and that it was not his "object to assert" it, and "repeat" it? In his of November 24th he is particular to say that he wants "no sophistry, no dodging, no quibbling, no arguing in a circle." I believe my statements are expressed with directness and frankness, and supported by secondary testimony, named to him, and of high, unquestionable authority. I have searched out and proved by ocular demonstrations, that insects do cause the rot. Mr. Goldsbury must refute my facts, and disprove the testimony which supports these facts before he can make many converts. I will leave all for the judgmemt of your readers. They can decide whether I have been frank or not, and who has "quibbled and dodged." I have asked him to refute my facts—not my "reasons and logic," but he fails to give one word in reply, or produce one witness, or cite one authority, or describe one research of his own, to disprove the fact of the presence of insects, or their depredation upon and infection of the potato plant and tuber. He again repeats his old assertion that "decayed potatoes were exhibited." Your readers must remember what I said in my last, that his assertion on this subject was "*positively untrue.*" I then explained the condition of the vines and tubers which the witnesses examined. If Mr. Goldsbury does not *believe the truth*, he may disbeleve. I am satisfied that *truth* will prevail, and that the public will decide who is right and who wrong. Mr. Goldsbury says the "knowing farmers, by observation, decide against insects as the cause of the rot." I have asked him to furnish the result of the investigations and experiments of his "knowing farmers;" but this he fails to do. I have asked him where the insects came from on the "*undecayed* potato in Mr. Flint's corked bottle?" But he fails to answer this question. Now let me ask him one more, upon this same subject. Were the insects on the growing vines and sprouts and undecayed tubers, the "consequence of decay," or did these insects appear upon the sprouts and vines, being warmed into life from the inherent, hibernated embryological condition of the tuber, as it was, exactly, when placed in Mr. Flint's possession?

I will thank Mr. Goldsbury to answer these questions, that the public may have a true definition of his meaning of his word "consequence." He will doubtless repeat his old fallacy, that "insects are the consequence of decay." But this I unhesitatingly deny. Undisputed authority refutes every assertion which he has made in this particular. Dr. Harris, on Insects, second Ed., page 3, declares that "Insects never spontaneously germinate from putrid animal or vegetable matter." Prof. Agassiz and others admit this as a fact, and support this authority. Is not this authority sufficient to convince Mr. Goldsbury, or your readers at least, that he has all the while been arguing against *facts—stubborn facts, and ocular demonstration which he cannot refute.*

If he now thinks he is correct in his assertion about "consequence and concomitant," let him bring forward his facts, ocular developments, or authority, to disprove the result of investigation as declared by Mr. Flint, Smithsonian Institute, Congressional Committee, U. S. Patent Office, Dr. Harris and Prof. Agassiz.

Baltimore, Dec. 1, 1860. LYMAN REED.

REMARKS.—The subject of the cause and the cure of the potato rot has been carefully discussed in our columns,—its importance inducing us to give it an extended space. Under the present circumstances, we can see nothing to be gained by continuing it, but whenever any new and plausible theory is introduced, we shall be glad to hear from our correspondents again.

For the New England Farmer.

"FRUITS AND THEIR CULTURE."

The *Farmer* of Nov. 24 contains some remarks of John B. Moore, Esq., before the Concord Farmers' Club. These remarks are in the main to the point; but the assertion that "nine-tenths" of the pear trees planted within the last fifteen years "have failed," I look upon as one of those extravagances in which farmers are too apt to indulge, when, from some local cause, they themselves happen to have failed in some favorite enterprise. In the course of the last fifteen years, I have planted about two hundred pear trees. They have been purchased indiscriminately, almost, at auction and in nurseries, whenever I could find trees *cheap*. Some of them were of foreign growth, and some native. Many of them had been a long time out of the ground, and were in bad order. They embrace from sixty to seventy different varieties. And yet, out of the whole lot, I have not lost half a dozen trees.

I beg you will not understand me as recommending the purchase of *cheap* trees. I believe they are the dearest in the end. My course had been guided by a desire to *experiment* upon different varieties—to test their adaptation to the soil of my garden, and to the varying climate of our seasons. And here permit me to confess, I am but very little wiser now than I was ten or fifteen years ago. I have learned something, to be sure, of the nature and habits of the pear tree, in its different varieties. I can tell one kind from another, in most cases, by the bark, the leaves, or the form of growth. But I *cannot* tell to-day which of fifty different kinds I would recommend for cultivation, (leaving out of the account some three or four standard varieties, such as the Bartlett, Bloodgood, and Duchess de Angouleme.)

I had, a few years ago, a high opinion of that noble old pear, Beurre Diel. I procured some eight or ten handsome trees of that variety on pear stocks. Their growth was all I could desire, both in thriftiness and beauty of shape. And yet, although most of them have fruited for several years, the quality has usually been insipid and tasteless, while two or three scraggy little trees of the same variety, on quince stocks, have borne fruit of excellent quality. I had about made up my mind, notwithstanding the beauty of these pear stock Beurre Diels, to engraft them all with some other variety; but fortunately, as I think, I last Spring decided on giving them one year more of grace. One of these trees, which has apparently attained nearly its growth, as it threw out no new shoots, gave me the past season a very excellent quality of fruit, while those, which kept on growing bore fruit of the old insipid kind, not worth the gathering. From this I infer that some varieties of pears must have time to mature the tree before they can mature the fruit, and that it will not do to condemn a tree on account of the quality of the first, second, or even third year's product.

Last year, several trees (on quince,) of the Beurre de Amalis variety produced fruit of a fine quality—almost, if not quite first rate. This year the same variety produced a very large quantity of large and handsome fruit, but if not exactly like "apples of Sodom," which "please the eye, but turn to ashes on the lip," it was so insipid and tasteless as hardly to be worth the gathering. And by the way, I think the extreme moisture of the past season, while it served to develop very beautiful pears, had an unfavorable effect upon their quality generally. For instance, I had Duchess pears weighing three quarters of a pound, and beautiful to look at as the aforesaid "apples of Sodom" in the most exalted state of poetic license; and yet, the eating of them hardly paid for the paring. The only exceptions that I know, are the varieties known as L'Angelier and Soverain d'Ete, the fruit of which proved better this season than I ever knew it before.

In the *Farmer* of December 8, you speak of Dearborn's Seedling as a pear of "first quality." I have a tree of that variety which bears full crops every year, and yet I could never pronounce it a pear of first, or even second rate quality. Last year, the fruit came pretty well up to the standard of a second rate fruit—perhaps nearly up to the Bloodgood. But the present season the fruit has not been good enough to give away. Still, from its great productiveness, and the beautiful color and form of the fruit, I would recommend all amateurs to have one tree of this variety. For a market fruit, I have no doubt it is one of the most profitable.

The general conclusion to which I have arrived, from my comparatively brief experience in the pear culture, as before indicated, is, that very little dependence can be placed on a large portion of the different varieties, until the trees, particularly on pear stocks, have attained a somewhat mature growth; and that, even then, the fruit becomes so modified by the circumstances of season, soil and position, it is not safe to judge except by the experience of a succession of seasons. The pear culture, I have no doubt, may be made immensely profitable; but to succeed in it requires time, patience, close observation, and a soil adapted to its many and somewhat diverse peculiarities. At any rate, the culture of fruit, properly appreciated, is a soul-ennobling school, in which, though there may be hard lessons in a pecuniary sense, there are others of wisdom, and goodness and happiness. E. C. P.

Somerville, Mass.

REMARKS.—We are always pleased and instructed by the communications of "E. C. P.,"

and hope he will write oftener. He tinges the practical and profitable with a genuine sentiment that reaches above the pocket, and gives rural employments the dignity and grace to which they certainly are entitled.

A NEW FARM SURVEY.

We have recently seen a plan of an estate on the sea-shore in Essex County, which represents the ground in a manner very interesting to all cultivators of the soil. The farm has a very uneven surface, with a long shore line, a small portion of which is beach, and the remainder formed of precipitous and ragged rocks. The inequalities of the surface are represented on the plan by figures, showing the height above mean low water. The beach is represented by very fine stippling with a pen, and the rocky shore is beautifully shown by elaborate pen work. Trigonometrical measurements are made to known points established by the U. S. Coast Survey, by means of which the distance in feet from the State House in Boston is obtained—and also the true North and South, which is shown upon the plan by fine lines running across it at intervals of 200 feet, and crossed by other fine lines at equal intervals, running East and West. From one of the first named lines, a short line diverging the right number of degrees, points to the magnetic North.

The drives, walks, buildings, (large and small,) yards, hedges, &c., are accurately shown. But the subject of most interest to farmers, and to which we wish, by this article, to call their attention, is *a survey of the ground beneath the surface, exposed to the eye*, of that farm under the farm we usually cultivate, for the purpose of finding its character, and the influence it may exert on the crops. A general mineral analysis is given of Hill-top, Middle-ground and Valley, by which may be seen what mechanical agencies and what kinds of manure or top-dressings may probably be used on the land to profit. This survey is shown on the plan by light tints or washes of different colors, which add very much to the beauty of the whole. The practical value of such surveys is destined, we believe, to be very great, and we rejoice to see this first effort at a kind of surveying which will no doubt be, in time, much employed by intelligent farmers.

This is the first instance of the kind that has come to our knowledge, and we find pleasure in stating that the work was done by our skilful and industrious young friends, Messrs. SHEDD & EDSON, of Boston. We should be glad to give the name of the enterprising and progressive gentleman who is the proprietor of the estate, and who has caused this work to be done, if we were at liberty to do so.

For the New England Farmer.

CURING CORN---DURHAM BULL.

MR. EDITOR:—Allow me to recommend the following for the benefit of those who, like myself, till the soil for a living. It is well known to all farmers that we quite frequently have very unfavorable seasons for curing corn after it is harvested. This autumn has been one of that character, and the general complaint is, that corn is very much damaged by the prevalence of damp weather. To avoid corn being thus damaged, allow me to state my experience, or rather the way in which I have for several years past saved my corn in a perfectly sound state.

All persons will acknowledge the importance of having their corn cured before freezing weather comes on. I have corn raised this year and husked the last of September, fore part of October, that rattles like old corn, and though much of my corn was more or less mouldy in the stalk, it is all now bright and doing well, not a mouldy ear to be seen, though much of it lies eighteen inches thick on the floor.

I have a building sixteen feet square attached to my barn, which I occupy as a shed with a loft above, having a floor made of narrow slats from two to four inches wide, and one inch apart, so that air can circulate freely up through the corn; also slats on two sides of the building, an inch apart, so that there is plenty of air under and over the corn. I should not be afraid to spread my corn two or three feet thick as I husk it. You will see that a very important point is gained by having corn have plenty of air underneath.

I have a very fine Durham bull calf, now 10½ months old; his girth is five feet eight inches. At nine months old he weighed 700 pounds, and by weighing from time to time, I find he has gained from three to four pounds per day. I suppose he will now weigh 850 pounds, and I expect to make him weigh, at one year old, 1000 pounds. If I do, I will let you know.

As I have my pen in hand, allow me to recommend a plan which I have in my mind for the arrangement of a barn with a cellar, and with a cistern for watering cattle, a sketch of which I send you. SPENCER BYINGTON.

Stockbridge, Dec., 1860.

REMARKS.—We are obliged to our correspondent for the sketch of a barn accompanying the above note. It has some original points which we wish to examine, and if we find they can be made available with other general accommodations of the barn, we may have the plan engraved. We are glad to find attention turned to this important subject, as we believe great improvement may yet be made in the internal arrangement of barns.

KING PUMPKIN.—The King of the Pumpkins for the year of grace 1860 was inaugurated at the Halle in Paris, on the 24th ult. It measures ten feet four inches in circumference, and weighs 319 pounds. It was carried about the market with this inscription: "The King of the Pumpkins of 1860, born in Touraine on the 6th of April, gathered September 20th, 1860."

AGRICULTURAL MASS MEETINGS

Now is the time for mental action and investigation. Let not this be a "winter of discontent," but one of earnest, profitable progress. Let us come together in council and discuss our personal interests. The merchants have their "Chamber of Commerce" and "Corn Exchange,"—the Banks their "Associations," and the brokers their "Board," the mechanics their "Institute," and the lawyers, doctors, clergymen and politicians their "Conventions" and "Resolutions." Let us profit by their examples, meet in council in various parts of the State and do something to promote the noble Art of Agriculture, and at the same time increase the products of the soil and elevate the homes of our land.

Who will take the initiatory steps in Old Concord? Will Dr. BARTLETT, with his well known ability and zeal, sound the tocsin in Chelmsford, and Gov. BOUTWELL and Mr. BANCROFT in Groton? Will Mr. PETERS and Dr. BURNETT see that old Worcester is aroused? Gov. CUSHMAN and Mr. GRENNELL, of Greenfield, kindle a flame in Franklin? Mr. DAVIS, of Plymouth, in his county, and so on throughout the State? What say you, brother farmers? Let us have a response, and see what can be done.

POINTS OF MERIT IN A FARM-HORSE.—Mr. Strawn, the well known stock-farmer of Illinois, states the points of a horse to be—a large eye, bay color, with heavy black mane and tail, round body, large ham-string, short back, long belly, fifteen or sixteen hands in height, and weighing about 1200 pounds.

LADIES' DEPARTMENT.

PRESERVATION OF THE HAIR.

It is a melancholy fact, that not one lady in a hundred, in the United States, has fine or luxuriant hair. Everybody is complaining of the loss of "woman's chief glory," and wondering why on earth pomatums and hair-washes, oils and restoratives, fail to bring it back, "as per advertisement." We suspect there would be a general exclamation of incredulity among the gentlemen, did they but know what an immense proportion of the tastefully arranged tresses they behold on fair heads, *grew* on somebody else's pate. Almost every one wears a "roll" or "braid," which comes from the hair-dresser's, and costs from five to twenty dollars. It is disposed with consummate skill—you cannot distinguish the sly hair-pins that fasten on the false decoration, yet there it is, a tacit confession that nature gives way to art.

"My hair *will* keep coming out, although I take the greatest pains with it," sighs the fashionable belle. "I don't see what the trouble is."

There are several "troubles;" first and foremost among which is the expensive "roll" itself. Any hair-dresser will tell you that the weight and pressure of this heavy mass of false hair with the heat it induces around the head, is highly prejudicial to the growth and welfare of the real hair. If you must wear a roll, let it be as seldom as possible. Whenever you can dispense with it, do so. Let its place be supplied as often as practicable with a light head-dress, secured with as few hair-pins as will support it. These last are fearfully destructive to the hair, cutting and wearing it to an incredible degree. Gutta-percha hair pins are the best, and even these should be limited in number.

All sorts of pomatums, oils and preparations had better be let alone. There is no use in soaking the skin of the head in grease, as is often done. If the hair is harsh and dry, castor oil perfumed is the best application, but the scalp itself should not be saturated. Washing the head thoroughly in fair water, once a week, will be found very beneficial.

Bodily health is almost essential to the natural growth of the hair. Nothing indicates the progress of sickness so plainly as the dry, dead look of the hair, and if our American ladies want lovely, luxuriant tresses, they must avoid heated rooms, late hours and fashionable dissipation. There is no help for it—nature will avenge any infringement on her laws, and the sooner we become thoroughly convinced of this fact, the better for us.

There is no ornament half so becoming to a female face, as thick, beautiful hair. It needs no decoration beyond a natural flower or two. Nets, diamond sprays, tiaras of pearl, are useless—it is like "painting the lily" to wear them. Remember this, girls, and take every precaution to preserve this exquisite ornament of nature's manufacture. Once gone, it is hard to coax back again.—*Life Illustrated.*

FURS ON BEAUTIFUL WOMEN.—There is nothing that looks so rich, easy and comfortable as a beautiful piece of fur wrapped around a beautiful piece of womanhood. Furs, like gold and silver, have always been highly estimated by the human family and "the rest of mankind." Rich furs were for many ages used as gifts from one prince to another—nobody less than a prince being allowed to wear them. The sumptuary laws which once existed with regard to the wearing of furs, were at once numerous and stringent. In the days of Henry VII. it was two years' imprisonment for any person below a baronet to wear a piece of ermine "as large as your hand." Those absurd laws, however, have all been repealed, so that a person at the present time can go his length on furs—the only limit to his taste being his pocket-book and creditors.

WOMAN'S HOPES.—In early youth, perhaps they said to themselves, "I shall be happy when I have a husband to love me best of all;" then when the husband is too careless, "My child will comfort me;" then through the mother's watching and toil, "My child will repay me when it grows up." And at last, after the long journey of years has been wearily travelled through, the mother's heart is weighed down by a heavier burden, and no hope remains but the grave.